

17<sup>th</sup> IPHS Conference ▪ Delft 2016

# HISTORY URBANISM RESILIENCE

VOLUME 02

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## The Urban Fabric

International Planning History Society Proceedings





17<sup>th</sup> IPHS Conference ▪ Delft 2016

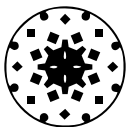
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17<sup>th</sup> IPHS Conference, Delft 2016 | **HISTORY ■ URBANISM ■ RESILIENCE**  
VOLUME 02 The Urban Fabric

The International Planning History Society (IPHS) is dedicated to the enhancement of interdisciplinary studies in urban and regional planning history worldwide.

The 17<sup>th</sup> IPHS Conference was held in Delft, The Netherlands, from July 17 to 21, 2016.

The conference theme 'History – Urbanism – Resilience' inspired contributions investigating a broad range of topics in planning history: modernisation, cross-cultural exchange, and colonisation; urban morphology, comprehensive planning, and adaptive design; the modern history of urban, regional and environmental planning more generally; destruction, rebuilding, demographics, and policymaking as related to danger; and the challenges facing cities around the world in the modern era.

*Convenor*

Carola Hein, Chair, History of Architecture and Urban Planning, TU Delft

This series consists of seven volumes and one Book of Abstracts. The seven volumes follow the organisation of the conference in seven themes, each theme consisting of two tracks and each track consisting of eight panels of four or five presentations. Each presentation comprises an abstract and a peer-reviewed full paper, traceable online with a DOI number.

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# PREFACE

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Conferences are unique moments of academic exchange; international gatherings allow people from around the world to interact with a scholarly audience and to learn about diverse theories, academic approaches, and findings. Proceedings capture these emerging ideas, investigations, and new case studies. Both the conference of the International Planning History Society (IPHS) and its proceedings place presentations from different continents and on varied topics side by side, providing insight into state-of-the-art research in the field of planning history and offering a glimpse of new approaches, themes, papers and books to come.

As a collection of hundreds of contributions, proceedings are a unique form of publication, different from both peer-reviewed journals or monographs. They are also an important stepping stone for the authors; along with the conversations held at a conference, they are opportunities for refining arguments, rounding out research, or building research groups and the presentations they are often stepping stones towards peer-reviewed articles or monographs. Having a written track record of the presentations and emerging research provides allows conference participants to identify and connect with scholars with similar interests, to build new networks.

Many conferences in the history of architecture, urbanism, and urban planning don't leave an immediate trace other than the list of speakers and the titles of their talks; the International Planning History Society (IPHS) has long been different. The first meeting in 1977 has only left us a 4-page list of attendees, but many of the other conferences have resulted in extensive proceedings. Some of them, such as the conferences in Thessaloniki and Sydney have resulted in printed proceedings, while others are collected online (Barcelona, Chicago, Istanbul, Sao Paolo, or St. Augustine). These proceedings form an exceptional track record of planning history and of the emergence of topics and themes in the field, and they guarantee that the scholarship will be available for the long term.

The conference call for the 17th IPHS conference in Delft on the topic of History – Urbanism – Resilience received broad interest; 571 scholars submitted abstracts. Of those proposals, we accepted 439, many after revisions. 210 authors went through double-blind peer review of the full paper, of which 135 were ultimately accepted. The proceedings now contain either long abstracts or fully peer-reviewed contributions. We are currently establishing an IPHS proceedings series, digitizing earlier paper versions, and bringing electronic ones into one location. We hope that the IPHS Delft proceedings and the whole series will be both an instrument of scholarly output and a source for research and that they will contribute to further establish research on planning history throughout the world.



Carola Hein, Convener  
Professor and Head, Chair History of Architecture and Urban Planning, TU Delft



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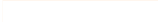
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# Keynote





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# TOWARDS CRITICAL RESILIENCE: LEARNING FROM THE HISTORY OF POST-TRAUMA URBANISM

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**Lawrence J. Vale**

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## INTRODUCTION: RESILIENCE AND THE HISTORY OF URBANISM

As we begin a conference entitled “History Urbanism Resilience,” I see my role as articulating some of the ways that the concept of “resilience” contributes to the history of urbanism—and to explore how the history of urbanism helps complexify our understanding of resilience. Resilience as a term has become both increasingly ubiquitous and increasingly contested. My remarks today will both explain this and, ultimately, defend the value of the concept—as long as we approach it critically. A first observation: putting the word “Resilience” in the title of the IPHS conference seems to have worked. The word appears in the names of 12 different conference sessions, and 35 separate papers use the word in their titles. So, either “resilience” is an inspiring frame for our thinking, or many of us are just extremely dutiful—or strategically adept—at providing conference organizers with what we think they want to hear. I suspect that there is some of each at work here. More importantly, this combination of utility and malleability accounts for much of the burgeoning appeal that the term “resilience” seems to have. Are we all talking about the same thing? Probably not, though there is certainly some reasonable degree of commonality. A quick perusal of the titles in the IPHS conference program suggests that we are, collectively, applying the idea of resilience to architecture, communities, and metropolitan form, and that it is applied in many contexts of social, environmental and political change, frequently including sudden disruptions caused by disasters or warfare.

In the spring of 2002, following on the 9/11 attacks in the United States, a colleague and I ran a semester-long colloquium that we called “The Resilient City: Trauma, Recovery, and Remembrance.” We wanted to look back at a variety of traumatic urban events from around the world to see how governments and their citizens had responded. How did recovery from traumatic events get conceptualized and how did these events get memorialized? Did it matter whether the cause was earthquakes or floods or wars or terrorist attacks? In other words, what could we learn from the history of post-traumatic urbanism that might help us conceptualize what might happen post- 9/11? My colleague Tom Campanella and I commissioned a series of papers exploring how cities (and their citizens) had historically recovered from sudden traumatic events—not just from terrorism, but from other abrupt events such as earthquakes, tsunamis, and wars. We quickly learned that, while it was possible to chart something called “disaster recovery,” that concept was hardly straightforward. In the past 200 years, virtually every large city in the world that experienced a disaster or war seems to have been rebuilt, no matter how extreme the level of destruction or loss of life.

From the immense losses suffered in cities such as Warsaw, Berlin, and Hiroshima during the Second World War to the total devastation of the earthquake in Tangshan, China—which may well have killed upwards of a half million people in 1976—cities came back.

In a world of nation-states (instead of city-states), there has been a new institutionalized form of what might be called caring-at-a distance. Since the late 18<sup>th</sup> century, cities have been much less likely to be left to fail on their own. The central leadership of a nation-state has, instead, invested in the restoration of its own damaged parts—and this pattern has been dramatically extended in the 20<sup>th</sup> century, with the tripling in the number of nation-states and the reduction in the number of widely dispersed empires. Coupled with corresponding rise of the global insurance industry (and re-insurance industry), and the rise of charitable donations (often linked to larger geopolitical strategies), post-traumatic urbanism had entered into a new phase of its history. Instead of the “lost cities” of the ancient world, we now have a planet where cities have been, almost inevitably, rebuilt. And, almost always, they get rebuilt in the same place as before—irrespective of underlying faults (and irrespective of whether those faults are geophysical or political). And—though it might take decades—most of these cities have indeed regained or surpassed the previous, pre-trauma, amount of building stock. Most reached their previous level of economic activity, and most eventually surpassed their pre-trauma population. Whether we are talking about Chicago’s Great Fire of 1871 or San Francisco’s famous earthquake and fires of 1906, or Tokyo following the Great Kantō earthquake of 1923 and the firebombing of 1945, famously destroyed cities are now still famous and much larger.

Still, to call such rebuilding of “urban recovery” does little justice to the profound complexity of the task. Saying that a city has “recovered” from traumatic destruction is hardly a neutral or simple judgment. Who gets to define it? Whose recovery matters?

All too much of the disaster recovery literature has chosen to ignore issues of politics and power, as if excluding such factors would somehow make the analysis seem more ‘scientific’. I was recently asked to review a draft article, entitled “Resilience and Sustainability in Relation to Natural Disasters” proposed for inclusion in a major reference book. The 13,000-word study, rooted in perspectives chiefly drawn from engineering, touched on politics only in passing, and the only form of “power” mentioned referred to electricity. Historians know better, as do the planners, developers, service providers and city officials who work in such complex socio-political settings. Richly realized case studies of past struggles to overcome traumatic events reveal the intricate overlays between infrastructure systems and political systems.

Many accounts of disaster recovery processes rely on some version of the model developed in the 1970s based on analysis of chronologies of post-earthquake and post-hurricane aftermaths in the United States and Latin America. Traditional models of urban recovery can come close to describing what is happening in the built environment—this one identifies successive phases labeled Emergency, Restoration, Reconstruction I, and Reconstruction II. The chart provides a useful means for tracking such indicators as “clearing rubble from main arteries” and attaining “pre-disaster level of capital stock and activities,” but everything here is treated as a single generalized aggregate of civic activity. The authors measured what could be most easily measured, and found that each of the four phases lasted about ten times as long as the previous one; a one week emergency would translate into a ten week restoration period, and a one hundred week initial reconstruction phase. (Since the scale here is logarithmic, the curves seem to cover roughly equal intervals.) The model captures a lot, but it is precisely what is missing here that underscores the psychic distance between simple recovery and more complex and holistic notions of resilience.



## RESILIENCE IN STORIES, SYMBOLS, AND POLITICS

I see three principal things as missing from a more engineering centered model of recovery: stories, symbols, and politics.

First, many descriptive accounts of urban recovery processes fail to ascribe agency, or define it too narrowly. We learn a sequence of events, but we do not see who has led them, let alone with what motives. Do decisions merely transmit the will of the highest levels of the state, or do grassroots pressures sometimes matter? Who gets to tell the story of the trauma and who gets to frame the narrative of recovery? When is it a narrative of progress? When is it a tale of redemption? And when is it what Edward Linenthal calls “the toxic narrative”<sup>1</sup>—rooted in life-altering traumas that cannot be overcome? What role is there for community-based media—versus mainstream media—in the articulation of the struggle and response to urban trauma? I have a current doctoral student, Aditi Mehta, whose entire dissertation explores this question, focusing on a comparison between Hurricane Katrina in New Orleans and Superstorm Sandy in New York. In the early 21<sup>st</sup> century, cities are full of bloggers and citizen journalists. Cities are stages for technologies such as low-powered FM radio and Wifi mesh networks. They host systems of social networking sites and offer opportunities for participatory documentaries. The media may have changed, but the underlying question is old and persistent: Whose voices matter?

Similarly, just as conventional recovery models assume some centralized direction and uniform experience that ignores the varieties of voice, so too do such models miss the power of symbolism. Strategically selected reconstructions of a destroyed built environment play particularly important roles in signaling to a traumatized public that positive change is taking place—that we will, in the near-ubiquitous phrase, “build back better.” Conversely, however, the symbolic priorities may underscore an over-eagerness to return to the status quo ante; nothing more, nothing less. In other words, it is not just that rubble has been cleared or that some “pre-disaster level of capital stock” has been regained; it is that specific, culturally relevant, publicly visible, activities have resumed.

In post-Katrina New Orleans, for instance, despite the extreme levels of residential devastation, city officials made certain that the downtown Superdome was repaired in time for the start of the 2006 National Football League season. Similarly, six months before that, city and neighborhood leaders sent the message to the world that Mardi Gras celebrations would go on just as they had in the antediluvian past.

These matters of symbolism and story-framing point to a third element that conventional notions of “urban recovery” often miss: the politics of redevelopment. Narratives of resilience are a political necessity, but they are always contested. Which aspects of “recovery” get prioritized? Who decides the primacies for investment when there are so many choices? Who negotiates and controls the politics of redevelopment, and who benefits from available funding? Which places, and which people, lag behind? When funding comes from outsiders, which things do they prefer to fund?

Sudden urban traumas reveal key insights about the nature of a polity—not just the heroism of individuals, but the priorities of a society. Who rebuilds what, where, and for whom? Despite the differentiated landscape of urban recovery, we frequently ignore the obvious clues about narrative voice (or lack thereof), architectural symbolism, and political favoritism.

If “recovery” is an inadequate term to describe the complexity of post-trauma urbanism, perhaps the more multivalent term *resilience* might be more useful? At the time of our colloquia sessions in Spring 2002 on “The Resilient City,” resilience was not a term typically associated with cities. It was, instead, a term from psychology used to refer to the inner strength of certain individuals, and it was a term used by engineers to refer to the capacity of certain materials to return to their previous form following a perturbation. And it was also,

increasingly, a term being used by ecologists to refer to properties of ecosystems that could be disrupted into non-equilibrium states. But the ecologists were talking about systems that were largely non-human (though certainly impacted by humans) so talk of non-equilibrium in ecosystems did not immediately translate into talk about socio-economic inequalities.

## THE UBIQUITY OF “RESILIENT CITIES”

Our ‘Resilient City’ sessions proved to be productive intellectual testing ground for the concept of resilience. Eventually, in late December 2004, we released a book called “The Resilient City: How Modern Cities Recover From Disaster.” Oxford University Press deserves some credit for timing the publication of the book to coincide exactly with the Asian tsunami—and then they got it into bookstores just in time for Katrina and the levee failures to hit New Orleans the following August.

By the time we completed the “The resilient city” book—reacting to what our various chapter authors had found—we were ready to question all three words of the title—even the “the”. The book didn’t have a question mark in the title, but I’ve added one here to underscore the kinds of questioning we undertook. What constitutes resilience? Who counts as “the city”? And do the trajectories of cities share enough in common to warrant speaking of something called “the” resilient city—as opposed to a less catchy title like *Some Partially Resilient and Highly Differentiated Cities: How Some Portions of Modern Cities Recover from Disaster Better Than Others*. Still, I am far from ready to drop the analytical utility of the term *resilience*. Although in 2002 few urban leaders facing the aftermath of disaster were yet using the actual word ‘resilience,’ our collective analysis of historical cases suggested that resilience could be a helpful umbrella term that could combine three things: physical rebuilding, economic recovery, and post-traumatic emotional reconstitution. Still, whether by tracing the twin trajectories of East and West Berlin during the ideologically-driven urban interventions of the Cold War, or by examining the fate of Beirut after its Civil War, or Mexico City after the 1985 earthquake, or Los Angeles after the civil unrest of 1992, it was equally clear that urban residents within any given city have had highly differentiated experiences in the aftermath of traumatic events. Words such as resilience and recovery proved to be highly loaded terms. They did not just connote some obvious return to a better prior state—at least not for everyone. If a place was profoundly unequal before disaster struck, any sense of ‘bouncing back’ could mean a return to similarly unequal conditions. A disaster, in this sense, was a window into the structural inequalities of a society at the moment immediately prior to when the disaster struck. In this sense, we concluded, resilience is not always a good thing.

Resilience is, however, a popular thing. My own quick examination of “google trends” shows that, over the last decade, the term *resilience* is even gaining ground on the reigning icon of ubiquity, *sustainability*. It is not just a generic growth in resilience, though; there is a particular interest in linking resilience and urbanism.

Over the last decade, the term “resilient cities” has spread like wildfire (or like water through faulty levees), though I think it largely emerged simultaneously in several places. Since 2005, there have been more than a dozen books with some version of ‘resilient’ and ‘city’ in the title. In addition to our book, centered on disaster recovery, there has been a book about responding to peak oil and climate change, one on how cities respond to terrorism and security challenges, a volume on the economic impact of 9/11, and a primer on reducing coastal city vulnerabilities.

The concept of “resilient cities” appears as a guide to good design practice, a comprehensive action plan for communities, a handbook for local governments, a civic movement, and even a book on the relationship between public libraries and resilient cities—written by a planner/librarian.

Books have been joined by multiplicity of conferences and conference reports, including the title of the 2013 joint AESOP-ACSP Congress, annual Resilient Cities events by ICLEI, and, of course, our current IPHS venture.

Foundations and international agencies have all jumped on board: MacArthur developed its “resilient regions” initiative; Rockefeller has made “100 Resilient Cities” its signature program, and the United Nations and World Bank repeatedly deploy the term.

As the diverse books and reports and conferences and initiatives suggest, the single concept of “resilient cities” can connote a focus on urban security and counter-terrorism efforts, or on economic growth, employment, and supply chain management, or on building technology to withstand physical threats, or on particular institutions that serve neighborhoods, or on enhancing strong communities and social capital, or on government responsiveness to natural disasters or on infrastructure adaptation to climate change. And of course it can also be about libraries! This enormous range suggests either that resilience is excessively malleable as a term, yielding wildly divergent discussions about cities that have little to do with one another, or that the pairing of “resilient” and “city” usefully recognizes connections among subjects that genuinely ought to be considered together. Perhaps it is a lot of each.

In late 2014, geographer Tom Slater, a well-known scholar of gentrification, labeled “resilience” as “the latest policy and think tank abomination to infect and paralyse the study of cities,” noting that it “has become a research funding council priority all over the world.” Slater’s critique focuses on what he sees as the close connection between “resilience” as a seductive label and “neoliberal urbanism” as a dehumanizing and discriminatory practice. At base, Slater blames the notion of resilience for casting “an anesthetizing spell” upon low-income urban dwellers.<sup>2</sup>

A poster appearing in New Orleans in 2014--9 years after the devastation of Katrina--quickly gained notoriety in the twitterverse. On the poster, Tracie Washington from the Louisiana Justice Institute complains: “Stop calling me Resilient. Because every time you say, ‘Oh, they’re resilient,’ that means you can do something else to me. I am not resilient.” Washington’s plea resonates with the academic language lamenting the alleged neoliberal capture of the term. Resilience, in this sense, describes the deliberate withdrawal of the state, coupled by complimentary (and complementary) reassurance that assistance from the state was not really needed. If non-elites are capable of coping on their own—forced into what is misleadingly called “self-sufficiency” because cannot rely on the state—this opens up terrain for additional forms of uncontested investment by the private sector. The language of resilience provides a seemingly empowering label for a process of double dispossession. First, low-income households are disproportionately victimized by a disaster and, second, they are again marginalized by the process of post-disaster investment.

Rather than dismiss the entire notion of resilience as no more than cover for cooptation by neoliberal disaster capitalism, however, I propose instead to embrace a notion of critical resilience. Historians of urban planning have long since found ways to disaggregate the experience of disaster recovery. Their accounts reveal both how elite interests gained disproportionately from many kinds of kinds of post-disaster investment, but also demonstrate how marginal groups attempted to cope, often revealing a deeply rooted resilience, even if it has not always been named as such. Let me illustrate this with two brief examples—one from 19<sup>th</sup> century Chicago, and one from 21<sup>st</sup> century Banda Aceh, Indonesia.

## CHICAGO: URBAN RESILIENCE AFTER FIRE

The story of Chicago after the Great Fire of 1871 is usually related as a tale of boosters, with the post-fire landscape unleashing remarkable levels of economic growth. The new city thereby epitomizes the notion of disaster-as-opportunity. Yet, amidst the rush to rebuild, the city sought to require fireproof construction within a large swath of the city known as the “fire limits.” By forcing everyone to construct new buildings out of expensive masonry, rather than repeat the pre-conflagration vulnerability of wooden dwellings, the city’s well-intentioned rules threatened to price out many low-income residents. The Great Fire had destroyed thousands of worker-owned wood cottages, and these homeowners, many of them recent immigrants, could do no more than hastily erect wooden shanties. As historian Karen Sawislak put it:

If the city legally barred a property holder from rebuilding with wood, and he or she could not afford brick or stone construction, this site lost all value for its owner. A lifetime of work and savings might evaporate.<sup>3</sup>

Chicago’s leaders had to sort out how to rebuild on a landscape of risk; increased regulation—banning wooden structures across the entire city-- would mean decreased affordability. And, in turn, the prospect of decreased affordability meant increased political pressure. Working-class Chicagoans viewed the proposed restrictions as something imposed by a cadre of downtown property owners who, already once-burned, wished to protect their investments by insisting that lower-income people should not build “fire-traps” anywhere else in the city. Moreover, Sawislak shows, some ethnic groups viewed the restrictions as designed by nativist proponents intent on undermining their ability to rebuild as an ethnic enclave.

Violent protests against expanding the “fire limits” disrupted the City Council meeting in January 1872. Faced with this backlash, the city caved. The Council voted not to extend anti-wood restriction across city, leaving much of the north side and southwest side open to woodframe construction and, of equal importance, also failed to pass enforcement mechanisms. Today, visitors and locals alike extol the remarkable rise of Chicago School architecture from the 1880s and 1890s but skip over the fraught uncertainties of the 1870s. The resilience of post-Fire Chicago thus has a split personality: an elite voicing rational pleas about the civic duty to build back better, and a working class that successfully fought to protect the value of its investment in wooden homes and neighborhoods. This worked fine for some working class owners, but overall this yielded rapid construction of a shoddy city. Immigrant labor from elsewhere flooded in and kept jobs scarce for local workers; housing prices went up, making the city unaffordable for many who had been renters prior to the fire. Taking resilience critically means assessing the impacts on all income groups.

## BANDA ACEH: URBAN RESILIENCE AFTER TSUNAMI

Few disasters can compare to the devastation caused by the tsunami that struck the north coast of Sumatra on December 26, 2004. Triggered by a 9.1 magnitude earthquake in the Indian Ocean, immense waves — some more than thirty meters high<sup>4</sup> — swept through the Indonesian province of Aceh, leaving more than 163,000 people dead or missing, including 60,000 in the capital, Banda Aceh.<sup>5</sup> It was the largest sudden loss of urban life in a generation, comparable to only a few disasters in modern history.<sup>6</sup> More than 60 percent of Banda Aceh’s buildings were destroyed; entire coastal communities were swept away. In many villages, the vast majority of residents were killed, survivors left homeless, and children orphaned.<sup>7</sup> Some 70 square kilometers of coastal land were left barren. Throughout this ruined terrain of mud, salt, and erosion, verifiable evidence of land tenure disappeared, as legal documents were lost and the tsunami’s power obliterated even “natural [boundary] markers like trees and footpaths.”<sup>8</sup>

Following the tsunami, the government initially sought to prohibit permanent building construction on land within 2 kilometers of low-lying coastal areas. This revealed a narrow desire for resilient housing but ignored the close connection between housing location and place of employment. In response, public opposition to the government's relocation proposal proved strong enough to get the government to shelve the plan. Viewed a decade later, Aceh has benefited greatly from new housing and neighborhoods built by a variety of NGOs to serve a broad range of incomes.<sup>9</sup>

Almost as staggering as the loss of life and livelihood was the challenge of rebuilding Banda Aceh from the ground up. In the months and years that followed, a rush of international aid — a wave of more than 500 groups that some have called the “second tsunami” — transformed the physical, cultural, and political landscape.<sup>10</sup> That wave has since receded, leaving in its wake 140,000 new houses, 1,700 schools, nearly 1,000 government buildings, 36 airports and seaports, and 3,700 kilometers of roads, funded by \$12 billion in foreign support.<sup>11</sup>

Rather than focusing solely on reconstructing the physical city, or recharging the economy, or attending to the emotional needs of traumatized survivors, Banda Aceh's planners and citizens have viewed recovery through multiple lenses. Housing recovery — let alone urban resilience — cannot be defined with simple metrics like the number of new units constructed.<sup>12</sup> Housing that supports the resilience of cities entails providing far more than shelter but also a means of engaging improved quality of life in a city or village.<sup>13</sup>

At MIT, I direct the Resilient Cities Housing Initiative (RCHI—pronounced “Archie”) which seeks to draw attention to a global array of projects and programs that demonstrate ways that housing (broadly considered) can be a positive force for the resilience of cities.<sup>14</sup> For RCHI, the resilience of cities refers to the capacity of urban areas to adjust and adapt to sudden shocks and longer term disruptions in ways that support and promote the well-being of all residents, particularly the least advantaged. Resilience is understood to be a capability that urban areas exhibit to differing degrees in response to various challenges, as opposed to a fixed condition or state. In such contexts, the engineer's conception of resilience as “bounceback” is clearly not sufficient, and it can even be misleading. An equity-driven view of urban adaptation insists that cities cannot demonstrate resilience by channeling new investment aimed at the return to some predisturbance status quo rooted in the marginalization of low-income groups. Instead, adjusting to external shocks entails a process of developing a more inclusive society that provides social, economic, and political support for the most vulnerable populations. Indeed, one key measure of resilience is how well low-income groups fare before, during, and after shocks.

To address this broader mission, housing must be conceptualized more holistically as a way to help low-income residents cope with four simultaneous challenges: (1) the persistence of economic livelihood struggle, (2) the dangerous environmental vagaries of a changing climate, (3) the impacts of urban violence and insecurity of tenure, and (4) the scourges of dysfunctional governance.

Beyond the initial provision of free dwellings to surviving households, the longer-term contribution of affordable housing requires that it afford access to economic livelihoods — either because it is co-located with a workplace, or because it is sited near employment opportunities that match the education and skill levels of inhabitants. Such housing also affords a healthy environment by reducing vulnerability to all manner of environmental hazards, from floodwaters to toxins. It affords both security of tenure but also personal and familial security, which is essential in a place like Aceh that has suffered not only traumatic disaster but also the political violence that accompanied a long separatist conflict. Finally, housing affords community empowerment and self-governance. New housing can bring together residents to negotiate community standards, norms, and expectations, and can create new forms of neighborhood association and village management.

The rebuilding efforts followed a wide range of approaches. I distinguish three types: Blank Slate Model Village, Inland Isolation, and Participatory Reconstruction, each of which offers implications for the notion of critical resilience and its relation to urban planning.

## LAMBUNG: BLANK SLATE MODEL VILLAGE

When asked for a successful example of redevelopment, Banda Aceh officials inevitably point to Gampong Lambung, considered a “model village” in large part because survivors followed the government’s reconstruction plan. Located near the center of Banda Aceh and less than a kilometer from the coast on a flat deltaic plain, Lambung could not have been more vulnerably situated. Of the village’s 5000 inhabitants and 700 households, only 60 people survived the 10 meter high waves caused by the tsunami — many because they were out fishing at the time.

The Indonesian government’s initial prohibition on permanent construction of new buildings within two kilometers of low-lying coastal areas<sup>15</sup> would have required thousands of people, including the Lambung survivors, to abandon their home communities and move away from sources of economic livelihood.<sup>16</sup> This mode of “adaptation” is increasingly common in efforts to cope with climate change but the consequences often fall hardest on those with the least resources.<sup>17</sup> While some Lambung survivors chose to relocate, others refused to abandon their ancestral home. Many returning residents embarked in a cooperative form of land readjustment that entailed a shared sense of community sacrifice and future vision, voluntarily ceding a portion of their land to make way for a better system of roads. In mid-2005, the government rescinded the building ban and the village was reconstructed on its original site. Survivors and their representatives agreed to a re-platting of the village. At its center is a new public space, an escape building donated by the Japanese Government, which doubles as a community center. The ground floor provides a badminton court, while other levels contain a performance stage, a wedding venue and a prayer area. From the roof, anyone can survey the reconstructed village and assess the relative turbulence of the sea.

The new Gampong Lambung contains about 300 households, about half its prior size. Most houses are elevated about a half-meter on concrete slabs, providing limited protection against future floods. Nevertheless, the continued existence of Lambung is an affirmation of community will. Its residents have defended the idea that is possible to avoid disaster by ramping up a building, rather than by ramping up policies to remove coastal populations.

But if people continue to inhabit low-lying coastal areas like Lambung, those systems will be tested repeatedly by climate change and rising seas. That has some wondering, wouldn’t it be more sensible to move all the villagers up into the hills?

## JACKIE CHAN VILLAGE: INLAND ISOLATION

An imposing gateway spans the only road into the resettlement community known officially as the Indonesia-China Friendship Village, dedicated in 2007. More commonly it is known as “Jackie Chan Village,” after the Hong Kong movie star who made a donation and paid a brief visit. Located 300 meters above sea level and 1.5 kilometers inland, with expansive views of the ocean, the village elevates residents above the reach of any future wave. The Agency for Rehabilitation and Reconstruction (BRR) gave free houses to former homeowners displaced by the tsunami, as well as some former renters. A Chinese contractor built 606 houses, mostly single-family homes with yellow concrete walls and maroon metal roofs. Residents pay a modest charge for water and a share of electricity for the pump, equivalent to about \$2.50 per month. Shared amenities include a kindergarten building, a village clinic, and a large covered concrete slab to accommodate an open market that, unfortunately, has never functioned properly.

When it opened, the resettlement village rehoused some 2,400 people, an unusually diverse community that included about 100 Chinese households, as well as Acehnese, mixed Acehnese-Javanese, and other ethnicities. A survey conducted three years after resettlement found that most residents were satisfied with the houses and valued them almost as highly as their pre-tsunami homes, even though they were smaller. However, the village's remote location, seventeen kilometers from Banda Aceh, creates employment pressures for the fishermen, becak drivers, traders, service workers, and small-scale entrepreneurs who resettled here. As Village Chief Wahid told our team, there is "nothing they can earn a living on here based on their skills."<sup>18</sup>

Within a few years, half the population left. Some moved closer to Banda Aceh but are still registered as living in the new village, and local officials seem to tolerate it when they rent out their village homes. Jackie Chan Village is an attractive settlement with flawed logic. It is a notable example of cooperation and commitment between the Acehnese and the Chinese governments, a cohesive, integrated village construction effort in contrast to the often hodgepodge cases with multiple houses by multiple aid agencies elsewhere. Its privileged siting offers safety and beauty. Resettlement policies by the BRR fostered diversity in a region previously wracked by conflict. And yet, its very distinction, its separation, creates difficulties for infrastructure provision and, most critically, poses often insurmountable challenges for the maintenance of livelihoods.

## UPLINK COMMUNITIES: PARTICIPATORY RECONSTRUCTION

A third type of approach underscores the full value of a critical approach to resilient urbanism, by revealing the role of housing recovery in promoting community involvement and local governance. Soon after the tsunami, the anti-poverty network Uplink Banda Aceh (UBA) took the strong stance that villagers should be encouraged to rebuild where they previously lived. At a time when most NGOs abided by the government's "no-build zone," UBA organized protests against the regulation and provided temporary shelter, food, and cooking supplies in coastal villages, rather than limiting food provision to refugee camps as the government preferred. With international funding, they quickly developed resident-driven reconstruction practices in 23 villages in and around Banda Aceh. They worked directly with community members to plan and rebuild housing and infrastructure, including community centers and mosques.<sup>19</sup> Most international donors, according to a report by the Tsunami and Disaster Mitigation Research Center, "viewed the tsunami victims as the objects, rather than the subjects, of the aid. They thought of the tsunami victims as weak, so most of the aid programs were targeted to short-term needs and physical projects and took a paternalistic attitude, and the format of the aid was not in accordance with local needs." UBA embodied a very different philosophy, that "outside parties who want to help disaster victims should empower the communities and consider the role of local institutions, so that community rebuilding post-disaster is initiated by the local people themselves."<sup>20</sup>

In March 2005, UBA helped form Jaringan Udeep Beusaree (JUB), a grassroots organization whose name means "the village solidarity network." Together, they documented pre-tsunami village demographic characteristics, including the residential history and employment experience of survivors, so that they could better target recovery efforts.<sup>21</sup> By that summer, UBA and its partners had salvaged enough wood from the tsunami debris to construct 450 temporary shelters across 23 villages, the first step in a participatory effort to plan and build more than 3,000 permanent homes by February 2007.<sup>22</sup> While global organizations such as the World Bank were still arguing about processes for hiring people to certify land holdings in advance of any actual reconstruction, UBA had already surveyed villages, obtained local buy-in, and started building.

Jakarta architect Marco Kusumawijaya worked with UBA between March and September 2005, and was in Banda Aceh when the government declared that residents should not return to coastal areas. "We defied that," he told us. "We organized people to go back, and did 3,000 houses before the World Bank started."<sup>23</sup> UBA's activism helped turn public opinion against the government policy. Faced with the political and logistical problem of relocating 20,000 families in coastal communities, starting in mid-2005 the BRR stepped back from strict adherence to the policy.<sup>24</sup>

As coastal rebuilding began, most architects “wanted a ‘clean slate’ like Lambung,” but Kusumawijaya urged his colleagues to learn from the structure of the original villages. He admired the village road pattern and mosque-centered layout and felt “it would be wrong to erase this.” UBA teams worked with residents to preserve attributes of the coastal villages, but also advocated for enhancements like better escape roads and access to quality land that could permit a move to higher elevations. They imported laser-guided total station surveying equipment to define plot boundaries supported by community consensus and witness accounts.

Throughout the recovery, UBA teams refused to limit their role to the construction of housing and infrastructure. Physical rebuilding, they contended, was merely the entry point for capacity building, self-determination, and psychological healing. The residents managed construction of their own homes, as UBA sought to rebuild not just housing, but trust. They organized art therapy programs and social events. They also helped restore income-generating opportunities. Much of the farmland was damaged by saltwater, so they taught villagers how to make compost and fertilizer and connected farmers with techniques for enhancing agricultural productivity in high-salinity soil.<sup>25</sup>

As part of a menu of five different earthquake-resistant house designs, UBA offered villagers the possibility of two-story homes raised above the ground. This design offered greater protection from floodwaters or minor tsunamis, while yielding a covered, protected space on the ground floor that could be used to store fishing and farming equipment or support a small business. The emphasis on resident input and involvement served to empower communities and enhance their capacity to share in their own governance throughout the reconstruction process. This simultaneous attention to physical reconstruction, economic recovery and emotional reconstitution exemplifies what is possible if one takes a holistic approach to critical resilience. It seems a far cry from the cynicism that assumes resilience can be no more than a rhetorical pawn of neoliberalism.

## CONCLUSION: TOWARDS CRITICAL RESILIENCE

In looking at the city-region as a whole, a critical approach to resilience avoids the temptation to view recovery only from the point of view of the most advantaged elites. In 19<sup>th</sup>-century Chicago and 21<sup>st</sup> century Banda Aceh, as in many other past instances, taking a critical approach to resilience helps us see how “building back better” is not some purely mechanical operation. Rather, by drawing on a definition of resilience that embraces not just economic recovery and architectural reconstruction but also issues of emotional reconstitution, it is possible to get beyond the facile judgment that resilience must necessarily connote neoliberal property interests run amok.

Once one takes the time to ask questions such as “whose resilience?” and “whose city?” it becomes possible to show how rebuilding agendas operate on class and ethnic lines, and reveal ways that elected governments struggle over how to represent the public interest.<sup>26</sup> In terms of the physical built environment, critical approaches to resilience similarly facilitate discussions of how ideological commitments to homeownership may dominate public policy, and may illuminate tensions over the regulation of risky construction. And, seen through its economic dimension, a critical perspective on resilience can clarify whose jobs benefit—and whose do not-- from post-trauma employment patterns. At base, Critical resilience entails a willingness to seek ways to “bounce forward,” not merely bounce back.<sup>27</sup>

In examining how various communities responded to disaster, it seems clear that different constituencies defined “recovery” differently and prioritized readiness for future threats in different ways. At the same time, however, they exhibited some common tactics and strategies, indirectly revealing the operation of resilience-seeking behavior even if they did not actually make use of “resilience” as a term. I have suggested that resilience takes place in at least three domains simultaneously: the physical restoration of the built environment, the pecuniary restoration of the economy, and the emotional resuscitation of individuals and families. City leaders consistently



attempt to steer a sense of resilience through three kinds of constructed acts: 1) efforts to manage the dominant narrative about the state of recovery (Who gets to tell the story?), 2) initiatives to highlight conspicuous symbolic milestones of recovery (Which projects signal a comeback?), and 3) attempts to negotiate and control the politics of redevelopment (Who benefits from available funding?). At the same time, however, taking a critical approach to resilience means listening for non-elite voices, too. Despite the differentiated landscape of urban recovery, we frequently ignore the obvious clues about narrative voice (or lack thereof), architectural symbolism, and political favoritism.

Ultimately, if resilience is to be a useful concept for urbanists seeking to learn from past and present practices, we need a definition of resilience that re-knits disciplinary strands that are too often kept separate. Resilience needs to include elements of physical bounceback, socio-economic networking, and psychological recovery. If historians of city and regional planning are to shape resilience into a useful term, we need to integrate the insights and approaches from engineers, ecologists, economists, and psychologists—all of whom—like the classic story of blind men trying to describe the elephant—have identified parts of the phenomenon but missed seeing the totality. Beyond this, however, resilience theory can only become a viable guide for resilience practice if there is an ethical imperative to ensure that the benefits of urban investment in resilience are equitably shared by those who have suffered the most or who are poised to face such dire consequences in the foreseeable future. Examples from the past consistently show uneven resilience, so it does no good to speak simplistically about an entire resilient city. Giving resilience a strongly normative dimension—one that asks tough questions about winners and losers and that learns from past examples—offers the best hope for making ‘resilience’ useful to ‘urbanism’. I very much hope we can do that.

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# Housing and Neighborhoods



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# Evaluating the Neighbourhood as a Scale for Planning

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Chair: Susanne Cowan



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# THE RISE OF NEIGHBOURHOODS AND NEIGHBOURHOOD PLANNING, 1900-2015

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The concept and the reality of neighbourhood planning has been around for a century. Planners almost everywhere, but especially in Britain, the United States, Canada, Australia, and New Zealand, are now accustomed to thinking of the neighbourhood as an important focus of their activity. Few scholars have considered why neighbourhood planning arose and became so prominent. An obvious reason is that neighbourhoods have become more important.

There is no way of assessing definitively whether neighbourhoods are more important now than a century ago. However, an extensive review of secondary sources, a systematic survey of newspaper coverage, and data on historical trends in formal education and property ownership make it possible to develop a plausible interpretation. There is a widespread belief that neighbourhoods are less significant now than in the past, notably because of the decline of local community. It is true that new means of transportation, together with media and digital communications, enable us to travel further and more frequently, and to learn about and communicate with people in distant places. People are increasingly more mobile and spend less time around the home. This is especially true of women who make up the labour force in unprecedented numbers. In addition, residential areas differ less, in that all now have a standard package of basic services.

However, other trends point to the growing importance of neighbourhoods. Newspaper coverage in Canada and the United States indicates that neighbourhoods, and neighbourhood planning, have a higher profile than ever. Everywhere, formal education matters more than in the past, thus most parents prize good local schools. In most countries, notably Anglo-American ones, homeownership levels are much higher; people move less often, pay more for children to access good schools, and have a large financial stake in their place of residence. Arguably, those households who lack such choices and live in disadvantaged neighbourhoods are, in relative terms, worse off than in the past. On balance, neighbourhoods matter more now than ever. This argument is broadly valid for many countries, although the details and chronology vary, notably with respect to the timing of the rise of owner-occupation. If neighbourhoods do indeed matter more, and in the ways suggested, the connection between housing markets and school systems needs to be better understood, while neighbourhood planning is clearly here to stay.

## **Keywords**

neighbourhood, planning, community, home ownership, Anglo-America, twentieth century





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# THE “NEIGHBOURHOOD RENAISSANCE”: COMMUNITY DEVELOPMENT IN ST. LOUIS IN THE 1970S

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This paper will examine how national trends shaped the way in which neighbourhood planning was implemented in St. Louis in the 1970s. This new urban planning focus on the neighbourhood, both nationally and locally in St. Louis, can be seen when examining the planning proposals for two moderate-income neighbourhoods experiencing post-war urban change, Skinker DeBaliviere and Soulard. By tracing the relationship between neighbourhood based planning and policies at the national and local level, this paper will start to define how a growing emphasis on historic preservation and community based development shaped the changing meaning of the neighbourhood as a planning unit at the national level. It will also question how these theoretical trends in planning shaped neighbourhood-based planning projects in the specific context of deindustrializing St. Louis. The paper will argue that the new programs did not benefit all neighbourhoods equally, neglecting poorer, African American neighbourhoods, and promoting gentrification in lower income white areas. In the end, neighbourhood based planning policies in the 1970s leave a mixed legacy for social justice and democratization, both in St. Louis, and in other cities across the nation.

#### **Keywords**

Neighbourhood Planning, Historic Preservation, Gentrification

#### **How to Cite**

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In 1977, the city of St. Louis was experiencing a 'Neighbourhood Renaissance' with greater attention to the neighbourhood, rather than the city or metro area, as the unit of planning. In response to the perceived failures of top down urban renewal, the city agencies welcomed the development of neighbourhood associations and actively sought guidance from resident groups, in an attempt to reverse their past "rubber stamp" approach to fulfilling federal mandates for participation. The newly elected mayor, Jim Conway, was a political product of the St. Louis neighbourhood movement of the past decade with grass roots supports from both black and white residents, in St. Louis's divided northern and southern wards. Editoralist, Ernst Calloway notes that Jim Conway, more than previous mayors, understood St. Louis's urban problems "from the people oriented neighbourhood vantage point."<sup>1</sup> Calloway and other commentators celebrated the fact that Mayor Conway would help reverse the long trend of urban renewal, which had tried to solve urban decline by the removal of people from the downtown. The election of Mayor Conway represented a shift in the approach to St. Louis's long-term problems of economic decline and racial segregation. By promoting neighbourhood-based solutions, with direct involvement from community groups, Mayor Conway hoped to spur the "Urban Renaissance" and back-to-the-city movement that had been building momentum over the past decade. In particular, the city of St. Louis consulted with communities regarding decisions about historic preservation, urban redevelopment, and the use of Community Development Block grant funding from the new Community Development Act of 1974.<sup>2</sup>

Some St. Louis commentators saw neighbourhood planning as a local phenomena, inspired by the city's historically distinct neighbourhoods with strong place-based community groups and neighbourhood improvement associations. However this planning approach also reflected national political shifts. The growing predominance of bottom up, small-scaled planning projects under the Model Cities and New Federalist programs reflected a reaction against the modernist top-down, large-scale redevelopment projects of the 1950s and 1960s. Policies such as the Community Development Act of 1974 provided new opportunities for distributing federal funds for innovative urban revitalization programs including infrastructural improvements for historic preservation districts, and small-scale infill and redevelopment projects in blighted areas.

This new urban planning focus on the neighbourhood both nationally and locally in St. Louis, can be seen when examining the planning proposals for two moderate-income neighbourhoods experiencing post-war urban change, Skinker DeBaliviere and Soulard. The two case studies represent two distinct racial and class demographics, architectural conditions, and historical legacies, to show the differences in how St. Louis's urban planning policies were applied in various contexts. Skinker DeBaliviere in west St. Louis, experienced racial integration in the 1960s and used community organizing to stabilize the neighbourhood, avoiding white flight and creating a racially diverse area. Soulard, in the Near South Side, formed a historic district as a way to encourage middle class owners to return to a largely vacant ethnic white neighbourhood. My previous papers on these case studies highlight both the positive ways that neighbourhood groups were able to influence the public funding and planning policies in their area, and the limits of community organizing as a means to ensure the social justice outcomes of revitalization policies, particularly in areas experiencing changes in their class or racial character.<sup>3</sup>

In this paper, these case studies serve as a counterpoint to studying city and nation wide policies. By tracing the relationship between neighbourhood based planning policies at the national and local level, this paper will start to define how a growing emphasis on historic preservation and community based development shaped the changing meaning of the neighbourhood as a planning unit at the national level. It will also question how these theoretical trends in planning shaped neighbourhood-based planning projects in the specific context of deindustrializing St. Louis. This paper will argue that the new programs did not benefit all neighbourhoods equally, neglecting poorer, African American neighbourhoods, and promoting gentrification in low-income white areas. In the end, neighbourhood based planning policies in the 1970s leave a mixed legacy for social justice and democratization, both in St. Louis, and in other cities across the nation.

## NEIGHBOURHOOD COALITION

In the post-war period, neighbourhoods began to organize to address perceived threats to their community, and to claim some local control over services. Nationally in the 1960s, both the New Right and the New Left started pushing for more decentralized forms of government and local autonomy for communities. The left, pushed for community input in response to the failures of redevelopment, and the bottom up reform movements of the civil rights era.<sup>4</sup> On the other hand, the right argued for a decentralization of decision-making and the demobilization of the “big government” welfare state through laissez faire policies of self-rule. The Neighbourhood Government Alliance tried to unite left and right, in an association between local community groups, starting with about 40 neighbourhoods from 6 eastern cities in 1965, and growing to 230 organizational members in 1979.<sup>5</sup> Eventually, the Neighbourhood Government Alliance splintered due to ideological diversity and concerns that neighbourhood governance encouraged economically and racially conservative policies through grassroots fascist institutions. Nonetheless, by the 1980s, most cities across the country had instituted some type of neighbourhood government initiatives.<sup>6</sup>

Like other cities of the country, St. Louis fostered a growing number of neighbourhood associations in the post-war period. In the 1950s, middle class neighbourhoods in an around the urban downtown core formed neighbourhood improvement groups in response to early signs of urban decline. By 1975, St. Louis had over eighty neighbourhood watch groups.<sup>7</sup> Community groups such as the Washington Heights Neighbours (WHN) and the Rosedale Skinker Improvement Association tried to maintain aesthetic and social standards as their neighbourhood started to face physical decay, racial and class integration, and white flight to the suburbs. In some areas, these smaller organizations were able to join with nearby groups to create district level neighbourhood coalitions like the Skinker DeBaliviere Development Corporation (SDCC). In 1965, by working with local institutions like churches and Washington University, the SDCC was able to start coordinating investment in their neighbourhood and working with the city agencies to shape redevelopment plans in their area.<sup>8</sup>

These neighbourhood groups did not only focus on their own immediate environment, but also worked together to address larger citywide threats. In the 1950s, working with other nascent neighbourhood groups around the city, these organizations helped to defeat legislation in the Board of Alderman which would have allowed for an expansion of rooming houses, and fought vigilantly to enforce zoning ordinances and eliminate housing code violations.<sup>9</sup> In the 1960s, another coalition formed between northside and southside neighbourhoods for the Save All Four Municipal Hospitals campaign. Editorialist, Ernst Calloway praised this effort noting, “It would appear that neighbourhood organizations are better suited at working in concert with a common purpose than many of our ward political organizations.”<sup>10</sup> These campaigns led to more long-term cooperation, through the Inter-Association of Neighbourhood Organizations, which had developed as a coordinating body for the dozens of neighbourhood associations that had formed spontaneously around the city. In the late 1970s, the coalition of neighbourhood associations has been working to develop a new city ordinance that would create a formal neighbourhood apparatus in municipal government.<sup>11</sup> In response, the city of St. Louis’s government agencies gave increasing attention to these neighbourhood groups during the 1970s.

## PRESERVATION

One of the other impetuses to neighbourhood organizing was historic preservation. The passage of the Historic Preservation Act in 1966 and the creation of the National Register of Historic Places, opened up the potential for preserving entire blocks or districts rather than individual buildings. The act also encouraged local community organizing to identify new historic neighbourhoods for registration. This act, responding to the problems of federally funded slum clearance controlled from above, not only started to identify a new form to urban development, but also a new process, with more bottom input from citizens. While at first registration served

primarily as a means to protect buildings from demolition, it also became a tool for private investment, though adaptive reuse tax incentives in the 1976 and 1981 Tax Reform Acts, which allowed for investors to claim tax credits for rehabilitating buildings for profitable ventures.<sup>12</sup>

In St. Louis, the first neighbourhoods to organize for preservation were Lafayette Square and Soulard. These two neighbourhoods on the Near South Side were comprised largely of historic homes either vacant or occupied by ethnically diverse white residents, where urban decline had been accelerated by urban renewal for highways and public housing. Middle class white residents moved back-to-the-city, attracted to the historic homes and parks. Lafayette Square, with its Victorian Houses with Mansard roofs, was the first neighbourhood in St. Louis to be registered as a National Historic District in June 1972. Under the leadership of the Lafayette Square Restoration Group (LSRG) it also simultaneously registered as a city historic district. The adjacent neighbourhood of Soulard, with its more mixed historic housing stock of row houses and multi-unit homes, filed as the second National Historic District, a few months later in December 1972. However to took another three years to form as a city district.<sup>13</sup>

This delay was in large part a reaction to a conflict between the two community groups in Soulard. The Soulard Neighbourhood Improvement Association (SNIA), formed from early “hippy” newcomers to the neighbourhood in 1968. A few years later, the Soulard Restoration Group (SRG), a more “yuppie” group of settlers, modelled themselves after the Lafayette group. The Soulard Restoration Group (SRG) represented the nostalgic bourgeois vision of re-inhabiting the 19<sup>th</sup> century multi-ethnic urban village through a purist preservation program celebrating the local “French” style row houses. In contrast, the Soulard Neighbourhood Improvement Association (SNIA), attempted to preserve working class culture and economic practices by protecting the interests of the low-income, ethnic and rural immigrants. As the city of St. Louis developed historic district guidelines for Soulard in the 1970s, these two neighbourhood groups fought over how strict to make historic codes and how these codes might affect housing affordability and dislocation in the face of gentrification.<sup>14</sup> The neighbourhood organization of Soulard demonstrates how historic preservation was indeed an incentive for neighbourhood organizing, and that these associations had direct benefits in promoting private investment and overcoming depopulation, economic decline and physical decay of the neighbourhood. However it also reveals how these neighbourhood associations did not always represent a “democratic” bottom up processes. Community organizing was not always inclusive, and some people’s voices were amplified in public discourse and given more sway in shaping urban policies than others, usually according to their social and economic status.

As part of this process of historic preservation, many neighbourhoods started to write local histories of their area. Residents from both Soulard and Skinker DeBaliviere wrote histories of their neighbourhoods aided by university professors and non-profit experts.<sup>15</sup> Eventually the city also began to promote the creation of these histories, and in 1978 the Community Development Agency published its own *History of St. Louis Neighbourhoods*. The preface notes that not only would the histories be of interest to local residents, but will “heighten interest in their general betterment, rehabilitation, and restoration” and thus be will be “a major asset in their improvement” of the neighbourhoods.<sup>16</sup> The city of St. Louis acknowledged that one of the tools for economic development was though “marketing out neighbourhoods” to middle class residents looking for “attractive housing at relatively low cost.”<sup>17</sup> They believed that a combination of marketing historic character, neighbourhood organization for improvement, and government investment could make these neighbourhoods attractive to middle class homebuyers who would create tax revenue and increase the economic stability of the neighbourhood. Thus governments became increasingly engaged in neighbourhood governance and investment.

## COMMUNITY DEVELOPMENT GRANTS

Not all neighbourhood initiatives began from the bottom up. Some of the impetus for community organizing came from the federal government through policies that decentralized decision-making and the distribution of urban development funds. While early urban redevelopment laws, like the Housing Act of 1949 had not provided any means for community input, amendments in the 1954 Housing Act, did mandate “citizen participation;” however, in reality the policy was largely implemented by “rubber stamp” commissions that did not reflect true democratic processes.<sup>18</sup> During this period neighbourhoods were often caught of guard by redevelopment projects, which were approved without much publicity, sometime years or decades before implementation. Many urban neighbourhoods had lost their relationship with city government, as the progressive era reforms and post-war convergence of power cut off the close relationships of wards to council members under the earlier machine-style politics. Cities ignored their inner-city neighbourhoods, focusing on the central business district as the locus for economic development, and thus renewal projects intended to benefit the downtown often hurt neighbourhoods. While communities did eventually achieve a “crystallization of resistance” to schemes in their neighbourhood, their participation was primarily reactionary, trying to stop plans they disagreed with, versus collaborating in developing plans they wanted to promote.<sup>19</sup>

This began to change in the 1960s, as the federal government developed deeper forms of participation. The Model Cities Program encouraged fostering leaders within poor communities to participate in self-governance of neighbourhoods. While Nixon dismantled this program in 1974, many of the community elders and groups nurtured by the programs leadership training and funding initiatives remained in place, mobilizing to face issues of housing quality and affordability.<sup>20</sup> A new program, the Community Development Act of 1974 further encouraged neighbourhood based development. While this act is an example of the Nixon-Ford New Federalism, dismantling the welfare state and the federal apparatus of urban redevelopment, it also created new opportunities for decentralized planning efforts. By replacing the old categorical grant structure with a new block grant program, it allowed cities to pursue more creative approaches for urban revitalization. The goal of this program was “the development of viable communities by providing decent housing and a suitable living environment, and expanded economic opportunities, principally for persons of low and moderate incomes.” The act further states that it will ‘...benefit low and moderate income families or aid in the prevention or elimination of slums or blight.’<sup>21</sup>

The availability Community Development Block grants infused money into neighbourhood projects, at a time when other urban programs received less federal attention and money. The availability of resources encouraged community activists to engage in politics in a new way. They shifted from the type of protests and resistance promoted by community organizers like Saul Alinsky, toward proactive utilization of resources and reform working with governments. With top down and bottom up pressures from the federal government and community organizations, development professionals at the city level began reluctantly to approach economic growth as directly related with the state of neighbourhood improvement. Despite the increasing specialization of policy regimes, there was a push for integration across planning efforts.<sup>22</sup> This paved the way not only for more funding opportunities, but for greater attention to neighbourhoods in city governance more broadly.

In St. Louis the block grants helped to undermine the power of the “‘rubber stamp’ brigade” which had “reduced participation to a structural farce,” and instead empowered community groups to shape how federal money would be spent in their neighbourhoods.<sup>23</sup> Neighbourhoods like Skinker DeBaliviere and Soulard, which had already formed strong improvement associations, were able to leverage the block grants for money for small scale development projects in their neighbourhoods, including improving streets, repairing sidewalks, re-landscaping parks, planting street trees, and providing amenities that would attract private investment. In St. Louis, critics like Ernst Calloway, note that between 1974 and 1977, these funds were spent primarily in higher income or gentrifying neighbourhoods. Also, less than 10% of the funding was spent directly on housing.<sup>24</sup>

This discrepancy shows how opportunities for locally based economic development did not materialize equally for all neighbourhoods, nor ensure democratic representation in decision-making. Wealthier cities often created more extensive neighbourhood governance organizations than poorer ones. Within a city, the poorer neighbourhoods were less likely to receive block grants than those that were starting to improve economically and attract growth. Even within the same neighbourhood, there were often two competing interests, with wealthier residents interested in protecting property, and poorer interested in improving social services. The policy makers often gave preference to the wealthier interests, not only because they had more political clout, but because with limited budgets, city agencies often need to tie their objectives in neighbourhood projects to their larger goals for economic development within the city.<sup>25</sup> Improvement to middle class neighbourhood and attracting new taxpayers were often viewed as more important to the overall economic development of the city than improving living conditions in low-income neighbourhoods.

Unlike the early redevelopment acts, which focused on housing improvement, the block grants primarily made improvements to public space, leaving housing to the private market, and thus not addressing affordability needs for the poor.<sup>26</sup> By focusing on “revitalization” the block grants requested by neighbourhood groups, and granted by cities, usually encouraged stabilization of middle class neighbourhoods rather than improvement of the quality of life in the poorest areas. Again, like with preservation, not all community groups had equal power to wield community development funds. Like other New Federalist programs in the late 1970s, this neighbourhood based approach switched the priority from addressing poverty to encouraging economic development through the private market, which would supposedly eventually “trickle down” to the rest of the city though increased property taxes.

## CONSEQUENCES OF NEIGHBOURHOOD GOVERNANCE

As St. Louis adopted neighbourhood governance it moved away from top down, slum clearance models of urban redevelopment, embracing forms of revitalization based in bottom up movements like neighbourhood organizing, historic preservation, and place based community development. In doing so it followed national policy trends toward localization of governance. While this shift eliminated many of the power abuses, neglect and physical destruction of the built environment for which early urban renewal programs were criticized, it did not necessarily improve the equality of planning programs. The new programs targeting federal and local government spending in areas with potential for growth and stability promoted gentrification. Based on Neo-liberal and New Federalists approaches from the New Left and New Right, the programs empowered local governances, but primarily those with middle class leadership, that could capitalize on narratives of growth and attract new taxpayers to the city. During this period St. Louis successfully began to attract new residents, and start to reverse the thirty-year trend of population and economic decline. However it did so primarily in the white middle class areas in the southern and western areas of the city, neglecting much of the northern area where most blacks lived. The neighbourhood programs contributed to the “growth machine” of St. Louis, thus focusing on exchange value over use value.<sup>27</sup> In the end the neighbourhood’s policy leaves a mixed legacy for social justice and democratization, both in St. Louis, and in other cities across the nation.

## Disclosure Statement

No potential conflict of interest was reported by the author.

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# THE GREEN DREAM AND UNEVEN DEVELOPMENT: A CENTRAL FOOD PROCESSING PLANT FOR OAKLAND UNIFIED SCHOOL DISTRICT

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*Independent Scholar*

On January 31, 2015, the Oakland Unified School District (OUSD) consultants attended a community policing meeting in the heart of a neighborhood that would be considered by most urban planners as a blighted area. The Hoover/Foster area of West Oakland, USA, is in fact often referred to in 'hood' vernacular as 'dogtown'-a gang-name that refers to an area this is both quickly gentrifying, and contested gang territory. The community gathered at the meeting was told by the NIAM Group, OUSD's community planning consultants, that this was an award-winning design whose construction schedule was set to begin in June 2015. The project had been named, "Rethinking School Lunch: The Central Kitchen Instructional Farm and Education Center". The project was marketed as a green project with a 48,000 square foot food processing plant and a lovely community garden where a local non-profit, Eco-Literacy would teach OUSD students urban agriculture. When asked how OUSD could build this project without notifying the community, the NIAM Group claimed there was nothing the community could do about it, because OUSD was exempt from local planning review for development on school property.

Rather than a green dream, this project lies within a long history of racially discriminatory land practices in housing and development depressing housing values in West Oakland, particularly for African American families who settled here in the 1950s through the 1970s. The historical list of racially discriminatory development projects includes racial covenants, redevelopment, freeway development, and other types of development. Racial covenants limited housing choices for people of color to areas like the Hoover/Foster area until post-World War II. Hoover/Foster has been identified as a blighted area under redevelopment and as a suitable location for housing authority units. The development of freeways leading to the San Francisco-Oakland Bay Bridge, often called 'the MacArthur Maze' drew boundaries of freeways around West Oakland, severely impacting neighborhoods through the destruction residential areas and the fracturing of community cohesion. The area became more blighted and plagued with drugs as more affluent members of the community relocated and the original migrants aged. The area is currently being gentrified by Millennials who find affordable housing near downtown Oakland in an overheated real estate market; this destabilizes the population but also brings vitality and youthful interest to the community.

The response to the placement of an industrial use kitchen and community garden on a 100-year old school site in a residential neighborhood has inspired heated discussions about the neighborhood's future and identity that are complex, particularly in racial representation. The polarized discussion pitted the Committee Against the Demolition of the Marcus Foster School (designed in partnership by African American architect Robert Kennard) against a group of community garden activists and OUSD. The community groups are racially diverse as is typical in West Oakland. The OUSD staff, consultants and superintendent were nearly all African American.

This paper will examine through this local American project the complexities of community neighborhood planning, including racial difference, uneven development and green marketing.

## **Keywords**

green development, schools, community gardens, racial identity, gentrification, low-income neighborhoods



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# ENVIRONMENTAL EDUCATION AS A TOOL FOR ADEQUATE PARTICIPATION IN THE PLANNING OF BRAZILIAN CITIES

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Outlined in the 1988 Federal Constitution, the Brazilian urban policy aims to protect every environmental issue effectively, regarding the regulation, planning and development of cities, to promote important changes to achieve sustainable development. According to history, the process of the Brazilian urbanization in the XX and XXI centuries resulted primarily from industrialization, when Brazil ceased to be arranged in rural areas. From then on, this framework guided the State's political actions. It had to match the urban-housing interests with the need for economic and social development of the territory and environmental protection. To the Brazilian Federal Constitution, article 225, the ecologically balanced environment is a "good of common use" and "essential to a healthy quality of life", indispensable to life with dignity. Thus, the Brazilian urban and housing policy has had to be redesigned. In this context, Brazil focuses on the Master Plan, a basic tool for improving towns whose guidelines are to meet citizens' needs, ensure quality of life and economic and social development. That results in proper urban control, sustainable growth and adequate infrastructure. Citizens' participation in the design and supervision of municipal activities is necessary to fulfill the constitutional principle of participatory democracy. However, for the population to participate in this debate effectively, citizens must receive adequate education to find viable solutions to dealing with urban issues.

Environmental education provides citizenship, awareness, education and an interdisciplinary approach focused on human development. The 1988 Brazilian Federal Constitution guarantees the right to education in article 205, establishing it as a right for all and a duty of the State and family. Article 225, section VI, of the Constitution requires that the Government promote environmental education at all levels to ensure the effectiveness of the environment. In 1999, the National Environmental Education Policy (Law n°. 9795), increased the importance of the awareness for the protection and defense of the environment through the implementation of formal and non-formal education. The concepts and ideas on environmental education convey a new look on how to educate citizens to focus on the development of a critical environmental awareness. Thus, this paper aims to analyze the general guidelines of the City Statute (Law n°. 10.527/01) and the relevance of municipal master plans for its planning. It also discusses popular participation, indicating mechanisms of the City Statute that should implement democratic management of the urban environment by creating approach strategies of governments and social actors, based on education for participation. Finally, it analyzes the environmental education under the bias of the Brazilian National Environmental Education Policy (Law n°. 9.795/99), underlining its status as a fundamental right and its indispensability for effective participation, harmony with sustainable development promoted by Agenda 21 and expanded by the Sustainable Development Goals to create new paradigms for the implementation of the 2030 Agenda, formally adopted by United Nations.

## **Keywords**

Urban development, Environmental education, Planning, Awareness, Participation



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# PLANNING A REVOLUTION LABOUR MOVEMENTS AND HOUSING PROJECTS IN TEHRAN, 1943-1963

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When life itself becomes a political project, any distinction between space of action and dwelling ceases to exist. This differentiation indeed is tended to neutralise the life itself. The emergence of such forms of life has progressively eroded the strict division between public and private space, between the space of living and space of political action. The city becomes at the same time a continuous field of exteriorised publicity and a sequence of autonomous, privatised interiors. Tehran is a paradigmatic case of the latter phenomenon; the house is the place where all the economic, political, social, theological and class conflicts are deployed. In Tehran, parallel to the Post- World War II political movements (1943-63), the immediate need for massive reconstruction not only resulted in developing new construction techniques and planning regulations, but also paved the way for direct implementation of series of political projects. Those attempts are commonly seen as political projects to instrumentalise new technology and modernist architectural and planning principles in order to tame the socio-political tensions. However the paper tends to read the first post- WWII housing projects in Tehran as instruments of social and political mobilisation, through which the city's working class and middle-class re-established their social and spatial autonomy, through a dialectical process of action and resistance.

#### **Keywords**

Tehran, Social Movement, Housing Project, Post-WWII, Tudeh Party, Chaharsad Dastgah, Kuy-e Narmak, Kuy-e Nazi Abad.

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## INTRODUCTION

In the landscape of the Central Asia, or particularly, the larger Iranian Plateau, the original form of life is nomadism. The nomadic way of life is characterised by movement that is in vital balance with the ever-changing environment. This harmony can be achieved through the extensive control and management of the natural forces. To maintain their mobile way of life, nomads cannot only rely on the temporarily found resources of water, food and energy; they make use of environmental forces to produce necessary resources. Such performance requires a high level of changeability and resistance, which exists in contrast to the rigid and static boundaries. Indeed this interaction is not for an absolute dominance over the external forces, but rather is a dialectical relationship, which drives and supports the nomadic life. This form of life exists in a permanent state of conflict. For nomads the ideal form of living is only possible by having a communal life. Aristotle defines “communal life” as the response to the political nature of humans (as they desire to live together).<sup>1</sup> The political significance of communal life reveals itself when it is in antagonism with stabilising forces of state. Settlement of those nomadic lives, presupposes a land-appropriation, and a land-division that is determined by a broader stable order, applied by state. Historically this order was conducted through both spatial and juridical apparatuses: making frames that bounded life to a territory in order to regularise it. It has undergone many changes in its more than three thousand- year history, while in this transition, some of those tamed lives have tended to reclaim their original way of living even in the spatial configuration of the permanent living space.

A historic architectural model that successfully facilitated communal life is the *medina*.<sup>2</sup> Medina describes a habitat within a frame, a city that is structured and defined by edges. This frame performs three successive functions. Initially, it establishes a certain group of people by will power, then it excludes and therefore defines the group in opposition to the others, and ultimately by holding those lives, it establishes a relation between the people, the territory, and the (legislative) power. In this way medina not only accommodates the “community of faithful,” but by separating believers from non-believers it forms the political community. This model informs well-known typologies such as mosques, caravanserais, schools as well as traditional Iranian housing units, *serai*,<sup>3</sup> that remains as a very dominant typology from the Bronze Age onwards. In its historical development as a dwelling space *serai* offers a delimited form whose walls are inhabitable; the chambers set in a rectangular shape around a void. This dwelling model became one of the most successful and easily achievable architectural means to celebrate the nomadic form of life; it mediates between open and closed, inside and outside, and more abstractly, between action and re-action, or forces and resistance.

This form of spatial organisation, an inhabitable wall enclosing a void historically conceived as a ‘terrestrial paradise’.<sup>4</sup> As analogon of the state, the enclosure is a micro-cosmos recapitulating the collective organisation of the political body. Thus, the Iranian house embodies many meanings: it is a theological entity outside history and the mythical foundation of the Islamic state; at the same time it is the engine of production and the theatre of everyday resistance.<sup>5</sup> The socio-political significance of the Iranian house (*serai*) became evident in the 20<sup>th</sup> century when political projects explicitly targeted domestic spaces. These attempts abandoned the traditional housing archetype, established new housing models, and ultimately manipulated the interior space of the house to avoid political tension and stabilise the dwellers’ lives. And, with this, the house once again became the epicentre of social movements and the core of the resistance.



FIGURE 1 One of Tudeh Party's meetings in front of the Iranian Parliament (Baharestan Square) Tehran-Iran, 1951.



FIGURE 2 Chaharsad Dastgah housing project, Tehran-Iran. The photo shows the project in its just after its completion in 1946.

## TEHRAN, POST WORLD WAR II

In Tehran, during the post-second world war period, the urgent need for massive reconstruction not only resulted in developing new construction techniques, but also paved the way for direct and fast implementation of both foreign and domestic political projects. Many of these attempted to instrumentalise modern technology and planning concepts on behalf of particular ideologies in order to control and to tame the socio-political tensions. This period could be characterised by state-initiated project of secularisation at large, at the center of which was the issue of domestic space and house. It operated not only through large scale planning apparatuses, but was initiated in the careful engineering of the form of living in domestic spaces. The intent was to administer and govern the Iranian society particularly in the large cities, like Tehran.

The Anglo-Soviet invasion of Iran, which occurred in 25 August 1941, inaugurated an interregnum that lasted twelve years. Although the occupation ended in 1943 but effect of which remained effective in the political structure of Iran. It terminated Reza Shah's undisputed control of the army, bureaucracy, and court patronage and initiated a period in which the new monarch, Mohammad Reza Shah, maintained control of the armed forces, but lost control over the bureaucracy and the patronage system. This interregnum lasted until August 1953 when Mohammad Reza Shah, through a coup engineered by the Americans and the British, re-established royal authority, and, thereby, recreated his father's regime to act as an executive monarch for the next two decades. The ultimate manifestation of latter period was in 1963 when Mohammad Reza Shah announced his White Revolution programmes within which the Iranian society ought to be modernised and secularised.

In the first period, 1941-1953, power was not concentrated as before. On the contrary, it was hotly contested between the royal palace, the cabinet, the parliament, and most importantly the urban masses, organized first by a socialist movement and then by a nationalist one.<sup>6</sup> The mass, which was mainly constituted of the urban middle-class and working class, formed a major threat to the Pahlavi dynasty.

The first real challenge to the notables came from the labour movements. Within a month of Reza Shah's abdication, a group of recent graduates from European universities and former political prisoners announced the formation of the Iran Communist Party on 29 September 1941. The party was called Tudeh, or the party of masses. By early 1945, the party had managed to create the first mass organisation in Iran's history. It became the party of the masses in more than name; in its first manifesto published on September 1944 in the Tudeh party's newspaper *Rahbar* (Leader), they claimed, "our primary aim is to mobilise the workers, peasants, progressive intellectuals, traders, and craftsmen of Iran."<sup>7</sup> Besides their political activities in the form of demonstrations and gatherings,

they aimed to train and educate the public, specifically the working and middle-class. Henceforth the discourse of domesticity was at the center of their political thesis to activate urban society, and addressing women in particular as a forgotten half of the active political mass. Within a few years, the movement's organisation published various newspapers, pamphlets and books through which it not only attracted workers and peasants but also drew support from urban wage earners and the salaried middle class—especially the intelligentsia. Among the members were famous writers, artists, politicians, and architects. They were not only active members of the Tudeh party but also they increased by establishing unions, organising professional associations, and artists' groups in line with the party ideology. Among them was the 'Society of Iranian Architects', which remained vital to the Iranian architectural movements during the second half of the 20<sup>th</sup> century.<sup>8</sup> Those architects and the political activists were the initiators and designers of many housing projects between 1948-1953. Those projects introduced new forms of domestic environments and were influential in perpetuating the social and political movements.

## **CHAHARSAD DASTGAH (400-UNIT HOUSING), THE FIRST HOUSING PROJECT, 1944-46**

One of the main issues of resistance was domestic life. In 1944, three members of the Society of Iranian Architects, Ali Sadegh, Manouchehr Khorsand, and Abbas Ajdari, designed the first large scale housing project in Tehran, known as *Chaharsad Dastgah* (400-Unit Housing).<sup>9</sup> In contrast to the traditional Iranian courtyard house typology, they proposed a new dwelling type that allocated rooms to specific functions, such as bedroom, dining room, and living room. The proposal limited the traditional way of living in the house into specific uses. Instead, through its spatial configuration, it aimed at encouraging the inhabitant 'to go out of the house' and 'to occupy the city' for their socio-political activities. The feature that the architects incorporated in the proposal was a central open space intended to be the locus of public activities. Although the Chaharsad Dastgah seemingly followed the international post-war housing typologies, by placing it within the socio-political context of Iran, it aimed at domestic reform to generate mass mobilisation.

The project was designed based on three main housing typologies. The first was a single-story with three rooms: a bedroom, living room, and dining room), along with a kitchen, storage, and a courtyard. The second was a two-story made up of five rooms: two on the basement floor, which was one metre lower than ground level and therefore received light from the courtyard, and a first-floor level with two bedrooms, a kitchen, storage, and a courtyard. The third typology was designed in three variations for the one-, three- and five-room apartments that connected to the courtyard and contained a street-facing shop. Contrary to the traditional Iranian housing typology (courtyard house, or serai), the separation of functions and divided spaces of the new apartment plans imposed a new lifestyle. For example, kitchens remained separate from living rooms and often combined with storage spaces or bathrooms. In fact the Iranian woman's role as a housewife, which had been central to the spatial dynamism of a home, became marginalised in these new typologies. Previously, all rooms were multifunctional, and living spaces could easily be adapted for different activities of the household. The logic of the proposed apartments dictated not only very specific activities, but also a controlled family size and therefore a lifestyle. The city and houses, which since the mid-1940s had mushroomed in the urban periphery, had been depoliticised through rational planning. While the previous attempts at public housing had failed for either financial or political reasons. By the help of Qavam's government (1942-43 & 1946-47), who at the time had the support of Leftist groups (especially the Tudeh party), Chaharsad Dastgah was completed between 1944-46. It became a prototypical model in design, planning, and materialisation of future projects.





FIGURE 3 Plans of Three Housing Typologies in Chaharsad Dastgah.

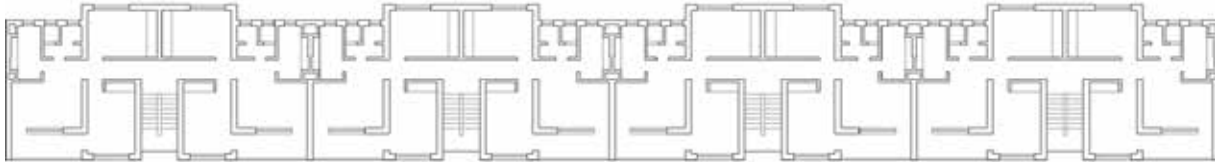


FIGURE 4 Typical Plan the Apartments Blocks, the Second Phase of Kuy-e Nazi Abad.

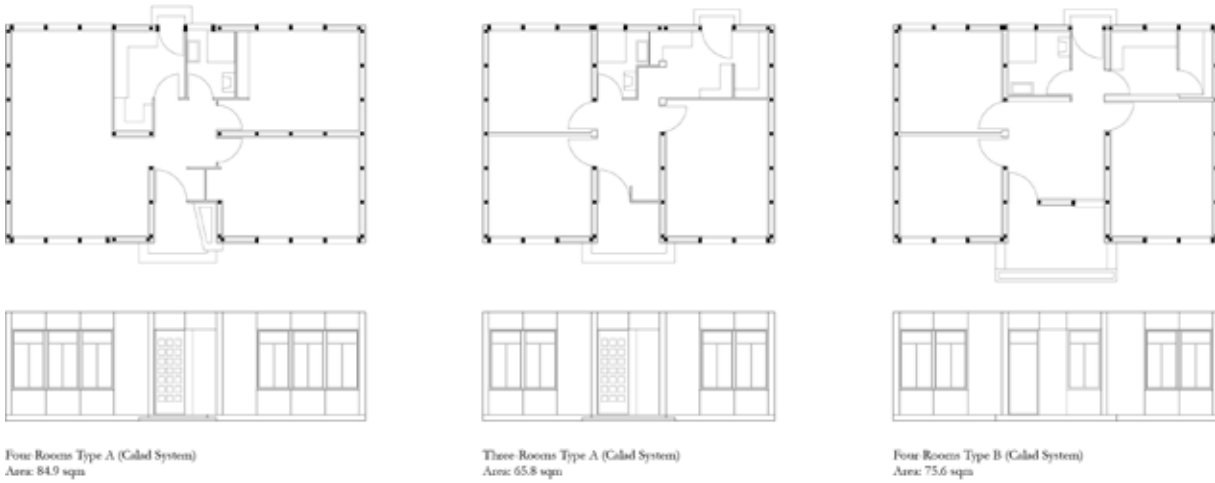


FIGURE 5 Plans of Three Housing Typologies in Kuy-e Calad.

Following on the experience of Chaharsad Dastgah project, the Mosaddegh government (1951-52), who at the time had full support of Nationalist, Leftist, and Islamist groups, launched the largest housing projects in the city. In 1951, the Law of Land Registration came into effect and large plots of land around Tehran became the possession of government as public property. At the same time, members of the Society of Iranian Architects with the support of the government founded the Construction Bank (*Bank-e-Sakhtemani*) that was responsible for providing affordable housing units and social housings. As a first step, the bank allocated 17,000 small plots of land for the purpose of accommodating middle-class and working class outside Tehran. Accordingly two of the largest housing projects of the city started in *Kuy-e Narmak* and *Kuy-e Nazi Abad*.<sup>10</sup>

## KUY-E NAZI ABAD AND KUY-E NARMAK

The lands of *Kuy-e Nazi Abad* were bought by the Construction Bank in 1951. The project is situated in the southwest suburb of Tehran, between the railway station and the military Qalemorghi Airport and covers an area of nearly 300 hectares. In the first phase, 2,800 building plots of 200 to 600 square metres were allocated for building low-income housing. These plots, due to the financial situation of their owners, were later subdivided into much smaller plots of 80 square metres. As a result the housing units in this area are primarily two room flats including a small store together with limited services.<sup>11</sup> However, in the beginning, the government provided housing for the working class, who were concentrated around the railway station and factories in the south of the city. In the late 1960s, the second phase of the project started to accommodate the middle-class groups, mainly teachers and employees of the railway company. Eight apartment blocks, each containing between 24 or 32 dwelling units, were constructed. The plan of the units was strictly divided and minimised into the functional cells. A uniform 80 square meter layout was used for all the apartments: each unit had three 3 by 4.5 metre-rooms, which were two bedrooms and one living room with a balcony attached. The kitchen was an enclosed unit placed between the living room and the bathroom. Contrary to the traditional housing typologies, the *Nazi Abad* project applied a very rigid and rationalised framework for life, limiting the domestic space to the essential biological needs. By eliminating the courtyard, this project forced inhabitants to go out in the city in order to exercise communal life.

In 1951, parallel to the *Kuy-e Nazi Abad*, the Mosaddegh government bought a 600-hectare barren land outside the city. On this large site, 8,000 plots sized between 200 and 500 square metres each eventually supported one-story detached house with small gardens. This residential district has been divided into 100 sections, each with open spaces and equipped with power supply and well water. About a third of this area, or 200 hectares, has been allocated for administrative buildings, services, as well as roads connecting the area. After two years of plot divisions and land allocation the construction started in 1953. To accelerate the process of construction, the Construction Bank commissioned a French company to produce prefabricated concrete modules. Based on those standard concrete panels (1.10 m wide) various typologies were designed. Members of the Society of Iranian Architects, headed by Nasser Badie and Iraj Moshiri led the design and planning of the housing complex. Following the master plan and the allotment of the area, they provided initial designs of 3, 4 and 5-room typologies. The clients were free to choose between the given typologies or buy the plot and build their own house according to the construction schedule imposed by the bank. In the later they had to follow the general regulations provided by the planners. The bank constructed 400 apartments in the northern part of the area as model houses, which was named after the French company, *Kuy-e Calad*. In 1961, the population of this residential district was almost 70,000, while in 1966 it exceeded 90,000.<sup>12</sup>

Despite the ever-growing housing needs of Tehran, housing projects seem to also carry a political agenda. They were designed to instigate the public to fulfil their political duties. The seeds of a revolution were planted in those domestic spaces. One of the main goals of these housing projects was to reform the traditional role of the housewife. By separating the functions and reducing the flexibility of the space, women were encouraged to go

outside the house and work alongside men. Paradoxically, this approach not only criticized the traditional role of Iranian women in Islamic society but also targeted the new Western role model, which was promoted by the state. The architecture of domestic space was not, in fact, the only instrument for this project; it was widely expressed through the leftist media.

In the October 1944 article “Home and Its Limits in the Modern Age,” published in *Bidari-e Ma (Our Awakening)*—the feminist bi-monthly publication of the Association of Women—contributor Farah Laqa Alavi emphasised that most of women’s traditional responsibilities should now be assumed by the society at large rather than confined to the home. In step with early Soviet ideology, the main concern of *Bidari-e Ma* was to get women out of the house.<sup>13</sup> Ironically these publications also accused the Pahlavi regime for its Western Modernisation Project, which tried to free Iranian women from domestic traditions.<sup>14</sup> In another article in *Rahbar* the writer claimed that the pro-Western political project of Reza Shah was to follow the German slogan of “kinder, küche, kirche, und kleid” (children, kitchen, church, and clothing),<sup>15</sup> and put the Iranian women back in the role model of “good housewife.”<sup>16</sup> As the movement got closer to the USSR, the promoted image of the woman increasingly resembled a Communist ideal. In an interview published in *Bidari-e Ma*, Said Nafisi, the Iranian Marxist writer, portrayed Soviet women as open-minded and active in the public sphere. The magazine also reported that despite their simple look and modest outfits, Soviet women possessed a unique beauty that surpassed women of other nations.<sup>17</sup> These visible Marxist-leanings, within the context of the global Cold War, was an alarm for the Shah and his American allies, which consequently instigated an American project.<sup>18</sup>

## HOUSING PROJECTS AS THE NEW EPICENTRES OF THE MOVEMENT

The same spatial devices of neutralization and control activated the political subjects (citizens) and triggered the counter-projects. Through these projects the concept of citizenship was reinforced and emerged to drive mass movements during the 1950s. For the first time in Iranian history people went out of their houses and mass street demonstrations eventually became a common form of protest. Those housing projects were indeed the hot spots in the later events. On November 3, 1951 the speaker of the royalist fraction of the parliament criticized Mosaddegh’s policies and described this new condition as:

“Statecraft has degenerated into street politics. It appears that this country has nothing better to do than hold street meetings. We now have meetings here, there, and everywhere – meetings for this, that, and every occasion; meetings for university students, high school students, seven-year-olds, and even six-year olds.

I am sick and tired of these street meetings . . . Is our prime minister a statesman or a mob leader? What type of prime minister says, “I will speak to the people” every time he is faced with a political problem? I always considered this man to be unsuitable for high office. But I never imagined, even in my worst nightmares, that an old man of seventy would turn into a rabble-rouser. A man who surrounds the *Majles* (parliament) with mobs is nothing less than a public menace.<sup>19</sup>

This social mobilisation that started in the early 1950s went beyond the political agenda of the Left and attracted large number of people of any ideology. In one of the largest demonstrations, on July 21, 1952 in support of Mosaddegh’s anti-Shah sentiment, thousands of people promptly poured into the streets, and after three days of general strikes and bloodshed, forced the Shah to back down. The crisis became known as *Si-e Tir* (July 21). In memory of those days Mosaddegh named *Kuy-e Narmak* as *Kuy-e Si-e Tir*. These riots and demonstrations became widespread movements throughout the country during the 1960s and 70s while the Islamists had the leading role in those years. It ultimately resulted in the Islamic Revolution of 1978-79. Although there is no immediate and direct effect of the spatial configuration on social behaviour, but specific spatial condition of those architectural projects helped the middle-class and working-class reclaim their social and political autonomy. In fact there seems to be a link between the form of life in domestic spaces and the political engagement of those people in the city.

## CONCLUSION

Contrary to the historical forms of ruling states in Iran as theological powers, since the mid-nineteenth-century, the state has tended toward secularization in order to tame the socio-political tensions. Carl Schmitt exemplifies this difference between the two forms of power as the one of statesman and shepherd. He writes, in the nomadic society “the shepherd (nomeus) was the typical symbol of rule,” which stands opposite to the statesman;<sup>20</sup> He rules over the flock with the nourishment by which he regulates their lives. While the statesman does not stand as far above the people he governs; “he only tends to, provides for, looks after, takes care of.”<sup>21</sup> In this way the shepherd mirrors the image of God and the divine Rule.<sup>22</sup> While shepherd performs through the mechanism of command and obedience, the statesman rules in a dialectical manner. This clash of forces, however, has not always been destructive; in particular periods, the conflicts have enabled and activated life in evolutionary processes. The nomadic way of life has been overcome by instrumentalisation of the idea of the house as legal and spatial framework through which the state manages and controls lives of the subjects. The conflict between the stabilising forces of the state and the form of life that escapes it is held within a four wall of the domestic space. While these walls establish an elementary distinction between inside and outside, between house and the city, and between rules, rituals and orders, the nomadic way of life maintains its dialectical opposition to static forces. It is characterised by constant movement and change, and is unfettered by systems of spatio-temporal organisation. Through the spaces of the house living becomes an act and tends to exceed the boundary of the house and overcome the city.

The ever-present possibility of conflict becomes the permanent state in which the life was held. In this way, the architecture of domesticity holds life within a dialectical conflict, and deliberately gives rise to confrontation and struggle. This spatial configuration retains the possibility for the form-of-life to emerge within this dialectical process. Once this architecture, as a frame, houses the subjects, it holds conflict; a moment in which action and reaction, movement and resistance emerges. It is precisely through this relationship that the idea of citizenship is conveyed. The house becomes a frame casting the life in an on-going process of resistance.

## Acknowledgements

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## Disclosure Statement

No potential conflict of interest was reported by the author.

## Notes on contributor

Hamed Khosravi is an architect, writer and educator. He is an associate lecturer at the school of architecture, Oxford Brookes University and a guest lecturer at the faculty of architecture TU Delft. In 2013 he co-founded Behemoth press, a Rotterdam-based architectural think-tank, with whom he co-curated architectural expositions and events including 'Architecture of Fulfilment' at the 2014 Venice Biennale, and 'Cerberus, The Three-Headed Monster' at the 2016 Venice Biennale. His recent articles include 'Camp of Faith' (2013), 'Geopolitics of Tabula Rasa' (2014), 'Discreet Austerity' (2015) and 'The Multiple Lives of Gabriel Guevrekian' (2015).

## Endnotes

- 1 See Agamben, *The Highest Poverty*, 11.
- 2 Etymologically, the term "medina" derives from the Akkadian root *dinu* (or *denu*), which stands for "law," "right," and "judgment" and appears as *din* in Aramaic. In its exclusive occurrence, *din* is politically loaded and borrowed primarily in Hebrew and Arabic as the root of two fundamental words: *din* as "judgment" or "law," and *medina* as "city." There is, however, another translation of *din*, which provides further meaning: in Persian, *din* means "religion." These three readings – legal, political and religious – construct the deep meaning of "medina," a term which affirms the formation of a city or a settlement defined and controlled by theological power through construction of limits and borders.
- 3 *Serai* stands for spatial configuration of living space. Etymologically the word is from the Indo-European root *tra* as boundary or limit, which appears in Avestan as *thraya* (to protect), and Persian *serai* as a bounded space or a house. In its historical development *serai* offers an architectural layout; a delimited space by inhabitable chambers. It becomes suffix in shaping words like *caravanserai*, which eventually addresses a temporary communal housing.
- 4 Terrestrial Paradise here refers to the common concept of an earthly garden. This idea is shared in most of the religions and has been historically an instrumental spatial model for cities, and building typologies. See Khosravi, *The City as Paradise*, 270-285.
- 5 See Afary and Anderson, *Foucault and the Iranian Revolution*.
- 6 Abrahamian, *A History of Modern Iran*, 99-100.
- 7 Abrahamian, *A History of Modern Iran*, 108.
- 8 The Society of Iranian Architects was also a politically active organisation that along with the leftist movement during 1940s and 50s. It had a central role in mobilising the intelligentsia.. Among the early members of the Society of Iranian Architects were Nouredin Kia-Nouri, which at the time was the active member of the central committee of the Tudeh Party and later became the secretary general of the party, Mohammad Mosaddegh who was the leader of the National Front of Iran and later became the Prime Minister, Fereydoun Keshavarz, active member of the Tudeh Party fraction in the Parliament and later became the Minister of Culture, other who at the time were either members of the communist party or sympathizers. See the full list of members in *Architec* 1, 39.
- 9 The head architect of the project was Ali Sadegh, who studied first at the Ghent University and then at the *Académie Royale des Beaux-Arts* (1932-36) in Brussels. There he was influenced by the modern movement and particularly the discourse of minimum housing unit (*Existenzminimum*). Later after returning to Iran in 1937, he incorporated those experiences, i.e. the protocol of CIAM 1929 in his practice of architecture. While Sadegh's architectural style was, perhaps, less distinctive than some of his contemporaries, he made significant contributions to the architectural environment of his time; perhaps his most influential contribution was the promotion of mass housing projects in Tehran as vice-president of the board of Mortgage Bank. Together with Iraj Moshiri, Naser Badie, and others, he established the Society of Iranian Architects in the mid-1940s, where he served as vice-president and then president.
- 10 These housing projects were named after the neighbourhoods in which they are located.
- 11 Bahrambeygui, *Tehran: An Urban Analysis*, 120.
- 12 Bahrambeygui, *Tehran: An Urban Analysis*, 119.
- 13 Karimi, *Dwelling, Dispute, and the Space of Modern Iran*, 121.
- 14 For example between 1936-41 Reza Shah ran a movement called *Women Awakening*. This movement sought the elimination of the Islamic veil from Iranian working society. Supporters held that the veil impeded physical exercise and the ability of women to enter society and contribute to the progress of the nation. This move met opposition from the religious establishment.
- 15 The phrase originally appeared in writings in the early 1890's when Wilhelm II denoted the role of women: 'Let women devote themselves to the three K's, *die Küche, die Kirche, die Kinder*' (kitchen, church, and children). The phrase then was used multiple times throughout the 1890's in liberal writing and speeches. In August 1899 the influential British liberal, *Westminster Gazette* elaborated on the story, mentioning, as well, the 4th 'K' as *Kleid* (clothing). This slogan later repeated by Hitler with less emphasis on *Kirche*.
- 16 Firouz, *Rahbar*, 8.
- 17 Karimi, *ibid*, 123.
- 18 Truman's Point IV programme.
- 19 Emami, *Parliamentary Debates*.
- 20 Here Schmitt refers to the Plato's Statesman 'In Statesman, Plato distinguishes the shepherd from the statesman: the *nemein* of the shepherd is concerned with the nourishment (*trophe*) of his flock, and the shepherd is a kind of god in relation to the animals he herds. Schmitt, *The Nomos of the Earth*, 340.
- 21 Schmitt, *The Nomos of the Earth*, 340.
- 22 "The true shepherd could only be a divine shepherd." Castoriadis, *On Plato's Statesman*, 101.

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## Image sources

- Figure 1: LIFE Magazine Archive.
- Figure 2: Ali Sadegh's Family Archive, Courtesy of Le Groupe d'Architectes de l'Ere de Evolution en Iran.
- Figure 3: Redrawn by the Author.
- Figure 4: Redrawn by the Author.
- Figure 5: Redrawn by the Author.

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# THE OTHER NEIGHBOURHOOD RESILIENCE OF CULTURE, HERITAGE AND RENEWAL

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Moving beyond traditional interpretations of heritage settlements in Asian cities as a locally fixed entity, this paper highlights how heritage and neighbourhood development intertwine as a resilient urban practice that draws together different institutions, and cultural practices. Heritage and cultural landscapes in India is a meaningful node between contemporary urbanization and the planning of neighbourhoods in cities. In 1999, the Delhi Chapter of the Indian National Trust for Art and Cultural Heritage (INTACH) and Delhi Development Authority published a list of 27 heritage precincts/areas/neighbourhoods in Delhi. The capital city's preservation policies challenged head-on the rapid urban transformations produced by the forces of liberalization at the end of the 20th century seeing a rise of boutique bazaars (markets) within heritage spaces, urban renewal developments nudging shoulder to shoulder with glass tower offices and shopping malls. In this light, the issue of urban conservation in India is complex mainly because historic neighbourhoods are occupied by a diverse group of residents, including the urban poor, leading to the worsening conditions of these areas. Taking the case of the capital city of Delhi, the paper explores the concept of heritage slums and the method of planning a prior historic cultural area through a comprehensive approach of area development and urban renewal – as a cultural historical urban landscape. This paper builds on the project of Nizamuddin Area Development Project as an urban renewal initiative in 2007 to conserve the heritage and improve the quality of life of residents in the basti (village) through joint venture between Aga Khan Trust for Culture (AKTC) and multiple municipal authorities. The project is the first of its kind to combine conservation with environmental and socio-economic development while working with local communities and stakeholders. The project is in the Nizamuddin Basti-Humayun's Tomb, and Sunder Nursery area with an aim of integrating these segregated heritage zones as a part of an urban revitalisation project. Confirming with the framework of the Aga Khan Historic Cities Program, the project engages in area based development programs and evaluates various changes in the quality of life of the residents. The Hazrat Nizamuddin Basti (village) is an urban village whose historical existence, and continuity lie within its religious and cultural context. The influence and the role of Sufism in the south Asian framework becomes an accompanying part in the contemporary planning process. It gives the basti its essence –its history, its urbanity, its meaning, its culture and its economy. This paper builds on two entangled questions. What are the ways in which the multiple historiographies of the neighbourhood – the historic basti become the dominant form, and are entangled with the everyday cultural and social spaces of the capital city of Delhi? Second, how does the transformation of planning affiliations with an international agency, local agency and multiple municipal authorities inform us about the 21st century neighbourhood planning of Indian cities? The paper situates along these questions an inquiry and illustrates an intertwined approach to heritage, urban cities and neighbourhood planning.

**Keywords**

Urban Heritage and Conservation, Neighbourhood Planning, Cultural Historical Urban Landscape





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# A STRATEGY FOR THE SEVENTIES: CIRCULAR A-95 AND AMERICAN REGIONAL PLANNING

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On July 14, 1982 United States President Ronald Reagan issued Executive Order 12372, one of many policy changes that were part of a broad effort to rebalance how power was shared between the federal government, the states, and municipalities. The order “discouraged the reauthorization or creation of any planning organization which is Federally-funded, which has a Federally-prescribed membership...and which is not adequately representative of, or accountable to, State or local elected officials.” In doing so, Regan also unceremoniously “revoke[d]...Circular A-95.” Though Circular A-95’s sunset passed with limited notice, for many planners it had been a critical piece of urban policy during the 1970s. Based on primary documents and secondary literature, this paper explores the quiet history of Circular A-95. We argue that in retrospect A-95 succeeded in creating a national framework for regional planning, even as its revocation signaled the end of a watershed era of federal support for regional governance. We conclude that the program should be read as a critical (but overlooked) outgrowth of the “creative federalism” of the 1960s, and as an important attempt to use federal power to establish a national planning policy in the United States in the second half of the 20th century. The idea for Circular A-95 originated in President Lyndon Johnson’s 1960s Great Society programs, when federal assistance to state and local governments in support of domestic policy increased significantly. The expansion of domestic programs pushed state and local governments to undertake a greater range of planning activities, though officials often complained of the difficulty of managing the range of requirements the different federal programs put in place. This hampered efforts to develop and implement plans, frustrating federal officials. Contemporary analyses of the situation concluded that a major problem was coordination, between different levels of government but also between neighboring political jurisdictions. In response, Congress passed two key pieces of planning legislation: 1) the Demonstration Cities and Metropolitan Development Act of 1966, and 2) the Intergovernmental Cooperation Act of 1968. Both were designed to streamline policies and improve coordination among federal, state, and local governments. To implement these laws, the Bureau of the Budget, issued “Bureau of the Budget Circular No. A-95” in mid-1969. This slim booklet established a new coordination and review process that state and local governments receiving federal funding for development projects would be required to follow. Hopeful that the program would spark greater regional coordination but skeptical that it actually could, researchers who examined A-95 during its short life struggled to produce solid evidence of its effectiveness. The “regional intelligence” many observers had believed the program would generate proved difficult to measure. Absent a clear metric of the program’s success or failure, the history and legacy of the A-95 program has since been largely neglected.

## Keywords

Regional Planning, Metropolitan Coordination, Planning History, Intergovernmental Relations



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# FORMS OF CITIZEN RESILIENCE AND URBAN HOMEOWNERSHIP IN PORTUGAL'S POLITICAL DEMOCRATISATION, 1974-1986

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This paper investigates the relations between forms of citizen resilience and urban homeownership during political democratization in Portugal, focusing on the period from 1974, when the Caetano dictatorship was overthrown, to 1986, when the country became a member of the European Economic Community (EEC). Drawing on Lefebvre's theory of space, as well as on urban histories on the emergence of a market in space, such as the one by Scobey, the paper conceives the production of housing as both a circuit of capital and of subjectivity formation, considering therefore homeownership as an assemblage that includes capital fluxes and a phenomenological dimension of space. The paper foregrounds a reflection on the disjunctions between a plurality of resilient forms for citizens to attain housing, inclusively through mortgage credit, and a discourse on the normativity of homeownership through credit that became gradually dominant from 1974 onwards. The paper argues that in present-day Portuguese cities like Lisbon or Porto, the links between inequality and the financialisation of spatial production are partly determined by persistent discourses on homeownership that were integral to a previous authoritarian project for social harmony. If scholars such as Bodnar have examined how the specificities of post-socialist homeownership in Central Europe cannot be understood without an examination of the persistencies of previous discourses and practices on housing, little is known about the rearticulation of the housing policies of authoritarian regimes in southern Europe after democratization. In past work I explored how envisioning a future of mass homeownership was defended as part of an anti-Communist vision of social harmony by the Salazar and Caetano dictatorships in Portugal. A valuable literature by scholars like Caldeira and Beauregard has examined coeval discourses in other Atlantic states such as Spain, Brazil, or the USA. In Portugal, both Salazar and conservative experts described homeownership as ensuring the freedom of propertied domesticity within a frame of planned urban growth. Nevertheless, housing was excluded from development plans, and much of the slight increase in homeownership rates was due to households moving from centrally located rental housing to informally created suburban subdivisions, tolerated by local municipalities, but illegalized through new planning laws during the 1960s. In this paper, I address how it was only after democratization in 1974 that the state started investing significant resources in fostering urban homeownership, through tax subsidies and campaigns by state-owned banks. This policy only started having effects in earnest after EEC membership and the legalization of private banking, and even then it was initially restrained due the avoidance of debt by citizens experienced in resilient practices of attaining homeownership in informal subdivisions. The paper draws on archival research on discourses relating homeownership and urban planning, focusing on representations of homeownership vis-à-vis life as a renter, in order to understand the discursive setting for the explicit housing and planning policies of the state. This work is part of a research project titled 'Inhabiting in Financial Times', undertaken at the Centre for Social Studies of the University of Coimbra.

## **Keywords**

Citizen Resilience, Urban Homeownership, Financialisation of Spacial Production



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# Micro-Level Resilience to Water Scarcity and Overabundance in Urban Neighborhoods

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*Chair: Nicolas Maughan and Ellen Janssens*



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# A COMPARATIVE STUDY OF COMMUNITY PARTICIPATION IN LOCAL WATER MANAGEMENT IN LAGOS, NIGERIA AND MEDELLIN, COLOMBIA

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**Anze Zadel**

*The new school, Parsons, School of Design Strategies*

This paper explores the issue of community participation in water management in Lagos, Nigeria and Medellin, Colombia. The paper also reviews the history of water management in these two postcolonial cities and addresses issues of access and micro-level resilience of urban communities. In both cities, residents experience acute urban conditions including a lack of access to clean water, inadequate sewage systems, and vulnerability to flooding during rainy seasons. Over the past five decades, the two cities have been experiencing rapid growth, territorially as well as population-wise. Today, both face serious challenges in their attempts to provide basic resources—potable water, housing, and electricity—for their growing populations. To address these issues, the governments of Lagos and Medellin have recently introduced new policy strategies that involve the participation of local communities. After weighing the pros and cons of these newly proposed policies, this paper looks at two local grassroots initiatives currently addressing the need for implementing flood water protection measures, educating local populations on water-related issues, and building local networks for the provision of potable water. This paper will also review the history of water management in Lagos and Medellin and address issues of access and micro-level resilience of urban communities. I will then focus on the policies recently introduced in these two cities promoting public participation in water management as a potential solution to acute access to affordable potable water. The water policies proposed in the two cities differ in the ways they delineate participation and in what outcomes they anticipate. In Lagos, the new policy proposes a combination of constitutional and traditional customary laws to remediate water problems, introduces minimum potable water quotas per resident, and promotes public-private partnerships (PPP) in providing water. In Medellin, participation is currently sought through decentralization and privatization of water resources. However, both face challenges implementing these new laws in practice, including lack of resources, weak databases, problems with accountability of governmental agencies, and disagreements as to what form public participation should take. After reviewing these new water policies, I will discuss two grassroots organizations, one from Lagos and one from Medellin, comparing the work on ground and policy advocacy of these organizations. In contrast to Western cities, most of which have taken a centralized approach to water management and implemented the so-called “bacteriological” model of water infrastructure (Gandy 2006) in which all water-related tasks are performed through a municipal water authority, cities in the Global South tend not to have such extensive and centralized water infrastructures. Although this is usually seen as a problem, it can be reframed as an opportunity to take water infrastructure development in a direction that promotes more democratic decision-making and sustainable water provision. Given that many cities in the West are currently facing difficulties maintaining their extensive water infrastructures in the face of economic stagnation and austerity measures, we would be wise to pay attention to the lessons of these experimental policies.

## **Keywords**

community participation, water management, micro-level resilience, urban communities





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# QUESTIONING THE CURRENT WATER DELIVERY STRUCTURES: AN INVESTIGATION OF POLICY AND PRACTICES WITH AN URBAN PLANNING PERSPECTIVE

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**Asavari Devadiga**

*University of California*

Systems for transporting water have been in place for thousands of years. Drains and pipes have been found dating to 3000 BC in Mesopotamia, and ancient aqueducts still appear across the landscape in Rome. Water has been hauled and transported in cans and wastewater disposed of in sluices and canals, and in pipes made of clay, stone, wood, bamboo, lead, copper, brass, iron, and plastic. As communities grew, networked systems became an efficient way of delivering water from distant water sources into cities and to a large number of people. In recent times, centralized piped systems have become the most common facilities to distribute water from distant natural water sources to a large population, especially in the world's urbanised regions. Despite economic development and the advent of new technologies, the problem of delivering reliable water to large sections of populations remains dire. Over 1 billion people in developing countries have no access to safe drinking water, and many more have only intermittent access. With its increasing urban share of the population, just over 50 percent of Indian urban households in the second most populated country, India, obtain water through piped access (via individual or communal taps). Piped access however does not assure reliable water; most piped water service is intermittent, or the water pressure is irregular, or the water is of questionable quality. Tracing this situation into history, this paper investigates the historical influences in water service deliveries and how communities in different contexts managed to adapt to impending problems. The planning perspective lends to the investigation of policy, practice, and the urban conditions in which the water delivery occurred and still occurs. The paper juxtaposes the historical and current contexts and presents findings from a combination of the extensive literature review and fieldwork by the author. The findings reveal literature on local water deliveries from the pre-modern period illuminating the different colonial and socio-cultural influences from the later 1700s and 1800s onward and influences on access to clean water in different parts of India. The paper discusses the different ways and various influences for the different ways the local neighbourhoods and communities gained access to water in an organised fashion – as community groups or from government agencies attempting to gain access to water – and how the local context (e.g., the diversity in urban neighbourhoods) got incorporated into the planning and delivery practices in ad-hoc ways. This paper also sheds light on how current policies have little reflection on the dynamism of growth and of the rapidly changing local context – physical urban development and form or the local municipalities and agencies. This raises important questions for the governing structures and policies connecting the spatial context and water delivery, which are rarely studied simultaneously in literature.

## **Keywords**

urban water delivery, governance, policy, urban planning, historic institutions, infrastructure



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# WATERFRONT JAKARTA: THE BATTLE FOR THE FUTURE OF THE METROPOLIS

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**Christopher Silver**

*University of Florida*

Jakarta, Indonesia was established as the Dutch trading center of Batavia in Southeast Asia in the early 17th century, a place identified by its connection to waterways. Thirteen rivers (and their tributaries) created the delta region where the Dutch planted this port and the city builders incorporated water into its essential fabric. Between the 17th century and the early twentieth century, Batavia's waterfront was the gateway to the Queen City. Throughout the 20th century, it was transformed into its backwater, a process facilitated by the dominant governmental, industrial, service and residential functions shifting to the interior regions of this expanding metropolis. The transformation was guided by a planning process that neglected the social and ecological foundations of the city and that treated the waterfront area as the place to accommodate the least desirable aspects of the modern city.

Beginning in the 1980s, there was renewed attention to Jakarta's historic waterfront area, in large part because of the redevelopment potential that it offered. From the very beginning of this renewed interest in coastal Jakarta, there has been accelerating protestations from indigenous residents who challenged the implications for their neighborhoods and their lifestyle to accommodate redevelopment. At the same time, the city experienced flooding at an unprecedented scale, not just in the always vulnerable coastal areas, but reaching deeply into the metropolis. This revealed the disastrous consequences of insufficient attention to water management, especially along the coastal areas. The dislocations that resulted from renewed waterfront development after 2000 brought increasing challenges from a civil society empowered by the transformation of Indonesia from an authoritarian regime to a more democratic society. The newly empowered local stakeholders challenged some of the planning efforts aimed at sustaining waterfront development and redressing the decades of neglect of the city's ecological systems. In recent years, therefore, the waterfront of Jakarta has reemerged as contested space, where the conflicting agendas of development, sustainability and environmental justice in this megacity are being played out.

Building upon an historical perspective, this paper examines impacts of planning and development on the changing character of Jakarta's waterfront in the late 20th century and the emergence of the battle for the future of the metropolis. It is noteworthy that the past three Jakarta governors, Sutiyoso, Bowo and Widodo, devoted significant attention to the waterfront region not just to promote development but also because of the increasing problems of flooding and in response to political pressures. Overall, however, less attention has been given to the implications of new development and flood mitigation on the indigenous population. As noted in a recent UN-Habitat study (2005) the problem of forced displacement prompted by the rejuvenated pace of redevelopment along coastal Jakarta has accelerated. The impacts of development and flood mitigation on the indigenous populations are central to the contested process of planning for the future sustainability of Jakarta.

## **Keywords**

Water, Jakarta, Flood control, Policy and Planning



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# THE RESILIENCE OF THE KAROO TOWNSCAPES OF SOUTH AFRICA: CONSERVING WHAT THE GROUP AREAS ACT, 1950, SPARED

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**Walter Peters**

*University of the Free State*

Apartheid South Africa was obsessed with separating citizens on a racial basis yet despite passing various segregationist laws, in many urban areas members of different ethnic groups continued to live as neighbours. This was countered by the passage of the Group Areas Act, 1950, which restricted the occupation of land and property ownership to specific racial groups, and saw the forceful relocation of citizens and the demolition of building stock, even in small towns. This paper will examine the imposition in Richmond, a historical town of the Karoo in the arid interior of South Africa, and a settlement with built environment characteristic of the type. By tracing the origin and development of the town, this paper will define the impact of such political vandalism. It will also argue that the spatial separation and demolition in terms of the Act affected mainly the visible environment of the poor, which vestiges remain for all to see. In 2013 the morphology of Richmond was studied by senior students of Architecture of the University of the Free State, Bloemfontein campus, who set out to conserve the resilient historical townscape with demonstrations of appropriate infill functions and architecture.

**Keywords**

Boers, church towns, Karoo houses, water leads, Group Areas Act

**How to Cite**

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## INTRODUCTION

The villages and towns of the semi-arid Karoo interior of South Africa, have common townscape features which unify the group and distinguish them. Almost all were established by the Dutch Reformed Church (DRC) in the early 19c, and the towering ecclesiastical building on a matching square can usually be seen from afar, as can windmills for pumping water from boreholes, without which no settlement is sustainable. To this developed a concomitant vernacular typology of houses attuned to the hot, dry climate. While originally built in support of the religious rituals, the Dutch legacy of town houses conceived as a walled development, and the ingenuity of water furrows, provided settlers with tree-lined streets and a sustainable form of urban agriculture in the backyards.

This paper concentrates on the built character of the Karoo towns while focusing on Richmond, which morphology was conditioned by topography and geography. Having developed naturally with the gradual inclusion of people other than whites, in the late 1960s the town was forcibly subjected to a reordering in terms of the Group Areas Act which separated citizens spatially on a racial basis.

Richmond has since been re-discovered as a book-town, in which process it was opportune to structure a project in 2013 for senior architectural students of the University of the Free State on the Bloemfontein campus, to focus on the conservation of its heritage<sup>1</sup>. Soon it dawned that, in fact, one was dealing essentially with what the Group Areas Act had spared, the central theme of the paper. Drawing on the field work and the published report (2013), this paper aims to illustrate the making of the historical built environment, the impact of the forces of political vandalism on its transformation into a formally segregated town, and the student proposals for the conservation, restitution and re-building of the townscape.

## THE MAKING OF THE KAROO TOWNSCAPE

The Karoo is the name given the hot, semi-arid region of the interior of South Africa with little perennial water and scrub as the vegetation, making only low-intensity pastoralism possible. Settlement of this region has its origins in the migration of descendants of Dutch settlers, Boers or Afrikaners, who spoke Afrikaans, from the south-western Cape into the interior in the early 19c.

Here farmers settled on vast farms with especially wool-sheep, and the DRC, in turn, established villages as *kerkdorpe* (church towns). These would be located wherever good water supplies could be tapped, and the town plans were characterised by grids, and churches on large squares for the encampment of farmer parishioners over high festivals lasting a few days, and some had market squares. Affording farmers would build *tuishuise*, cottages initially for use during communion services and later in retirement. Following the Dutch tradition, the *tuishuise* were unified as a walled development, and their proper context has quiet, tree-lined streets with irrigation furrows which allowed the settler to be nourished by the products of vegetable and fruit gardening at the rear of the allotment.

The cottages are sited up against the street and raised by a *stoep* (an uncovered platform) at the interface between pavement and house. Plan and section are the most economical conceivable with a central passage, off which lie the principal rooms, and a *brakdak*, a flat roof of poles covered by a layer of reeds tied together with twine, which supported a covering of about 300mm of brackish soil as insulation. However, from the 1850s on, corrugated iron, less prone to leaks, was increasingly preferred, either on top of the *brakdak* or as hipped or gabled roofs with boarded ceilings. Floors and walls were of stone or slate, the latter usually plastered and whitewashed.

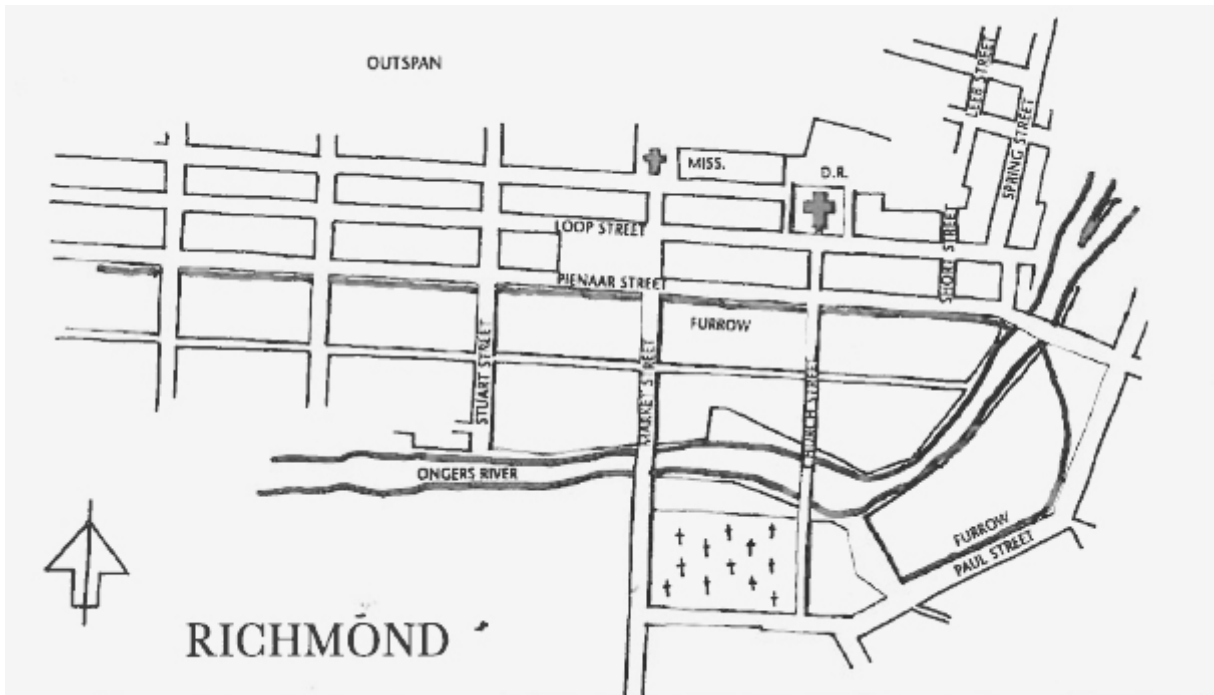


FIGURE 1 Richmond town plan of 1843 by surveyor JL Leeb (Fransen, 2006: 297)

The classical origins of the Karoo house are manifested in the symmetrical street façades with sliding sash windows and louvred shutters, to either side of a panelled entrance door replete with fanlight of many designs to illuminate the central passage. The street elevation would usually be parapeted with a cornice, either pedimented or stepped, with the climax co-incident with the axis of the centred door. In time, the narrow stoeps became verandas, with timber posts and trellises, and these were covered with bullnose-, bellcast-, or tent-profiled corrugated iron sheeting, with individual sheets often painted in alternating colours.

The regular townscape of Karoo houses, tree-lined streets and interspersed windmills, is in sharp contrast with the church, usually of the second generation, towering and somewhat medieval in proportion, and the church square, and sometimes also a market square.

## ORIGINS AND CHARACTER OF THE KAROO TOWN OF RICHMOND

The wool-sheep farming community of the Bo-Karoo (upper Karoo) had been spiritually served by the Graaff Reinet parish, based in the last town established under Dutch rule of the Cape as a *drost* (magistracy) in 1785, and its first church was built c.1796. At some 130km distant, in time, the need for a *dogtergemeente* (daughter congregation) dawned, which in turn, warranted the founding of a new *kerkdorp* as the seat of the new parish. For this, the community acquired the farm Driefontein, which as its Afrikaans name infers was distinguished by three natural springs and enabled settlement.

Unlike most, Richmond is without a gridiron plan. In 1843, the experienced Surveyor JL Leeb (Beaufort West, 1925; Victoria West, 1843) proposed a topographically sensitive plan, between the defensible Vegkop hillock in the north and the virtually perennial Ongers River on the south. Streets were aligned east-west, and the principal street, Pienaar Str, crossed the bend in the Ongers River as a ford. As the Cape fell under British rule from 1806, the name of the new town was changed on registration, from Driefontein to Richmond, with which British town there is, however, no association<sup>2</sup>.

Given three springs, like many Boer-founded towns there would be both wet and dry *erven* (allotments). Supplied by the springs, the wet *erven* were the subject of irrigation in the form of an infrastructure of *leivoere* (water leads), which served to sustain villagers, who could grow vegetables and fruit in their backyards. Part of furrow system is extant in Pienaar Street, where the houses line the street in a walled and tree-lined development, leaving a maximum of space for urban agriculture in the backyards. The original town had 20 wet *erven* and 31 dry, the latter of which were considered for *tuishuise*, which with only periodic accommodation did not need backyards as gardens. These were located in Loop Street, higher yet parallel with Pienaar Street, which as the name suggests was a pleasant street to walk along, and is today the main thoroughfare.

Loop Street contains the town's landmark, the DRC church on its square, built 1844-7, also by surveyor Leeb, but since remodelled, and which terminates one transverse street crossing the river, obviously, Church Street. The other transverse street, Market Street, passes Market Square and crossed the next parallel longitudinal road, before terminated on the mission church<sup>3</sup>, which occupied the other church square of town, and both church and square defer to the DRC church. Neither of these church squares is sited on the highest point, in a bend or on any topographic feature, but it would appear that the crossing of the Ongers River had a bearing on the decision, especially as the two parallel streets define the cemetery on the opposite side of the river. In Boer-founded towns the cemeteries were always located on the outskirts, and often near the rivers.

The development of thick-walled plastered buildings with *stoeps* or verandas, and either *brakdakke* with cornices, or hipped corrugated iron roofs, and fanlights over the central entrance doors, characterised the town as the photographs of the 1950s and early '60s by Gabriel Fagan attest (2008).

## TOWNSFOLK AND CHARACTERISTICS

The Karoo towns of the mid 19c were designed for Boers or Afrikaners, and attracted butchers, bakers, blacksmiths, innkeepers, photographers etc. while *smouse* (travelling pedlars) provided for most commercial requirements. In due course, the migrating English community saw to the towns also sprouting 'English churches', usually Anglican, but it would appear to have been Presbyterian in Richmond, often a free mason's lodge, and some had synagogues.

There are unlikely to have been indigenous black Africans, but certainly coloureds, people of mixed descent, or former slaves after their emancipation in 1830, and the mission church would have been established to provide for the spiritual needs of this community. Coloureds are likely first to have found accommodation on the fringes, in the earliest settled portion of town, along the floodplain on the southern bank of the Ongers River where the houses along Paul Street were served by another water lead. It is likely that less affluent, servants or labourers settled across the ford and along the road westward, in vernacular Karoo houses, with *brakdakke* rather than roofs of corrugated iron.

In the Cape there were no restrictions on ownership and occupation of land, and only moderate levels of segregation, thus coloureds could live wherever they could afford. In fact, no historically contentious issues based on race could be traced, and it appears that during the Anglo-Boer South African War (1899-1902) the defence of Richmond was a spontaneous and mutual affair. It could not even be established whether at that time Richmond had an *onderdorp*, a 'location' where people other than whites resided.



## THE GROUP AREAS ACT AND RICHMOND

In 1931 South Africa gained greater autonomy from the erstwhile colonial power, Britain. Thus the (whites only) National Party came to power in 1948 with the narrowest of victories under the slogan of *apartheid*, an Afrikaans word meaning separation. The Party lost no time in going about the implementation of *apartheid*, and in 1950 already passed the Population Registration Act, in which every citizen had to be classified by race. This was the necessary base for spatial reordering of towns in terms of the Group Areas Act, passed in the same year (consolidated 1957; and again in 1966). Herewith the state could declare any 'defined area' for occupation and property ownership by members of a single race. Nowhere was this more glaringly done than in District Six, Cape Town, which saw the forceful relocation of 60 000 coloured residents and the wholesale demolition of their building stock in 1966. However, it should be noted that the apartheid government resisted the demolition of places of worship, Christian or Islamic, and that 50 years later, most of the land still lies fallow.

To return to the current narrative, in many urban areas members of different races continued to live as neighbours. However, the apartheid government wished to reduce social contact to a minimum, which would, of course, also eliminate any competition for urban space. Thus people not of a 'prescribed group' would be forced to leave and take up residence in the 'group area' set aside for their own racial group, geographically separated.

The initiation of racially divided town plans was prompted by the central authorities, who designated buffer strips of open land at least 30m wide between different population groups. Accordingly rivers, ridges, industrial areas, railways etc served to aid the design of the segregated town plan. There was also to be no direct road linkage between races except for commonly used parts of towns, eg the central business district. This was always declared white, but due to its zoning, no one was permitted to live there.

Upon the proclamation of a group area, 'disqualified groups' were precluded from acquiring property in that area. These people were given 'evacuation periods', the object of which was to ensure that there was alternate accommodation for those unable to provide for themselves, before they were required to leave their old homes. Willing sellers were offered the market value for their properties. Further objects were slum clearance, in terms of the Slums Act of 1934, in which case demolition of building stock would follow forceful relocation. The Group Areas Act affected mainly coloured people, but whites as well, although to a much lesser extent, and indigenous blacks were dealt with under different legislation. It should be noted that today coloureds are the majority group in both the Western and Northern Cape provinces, in which the Karoo towns are located. Later, the accent was taken off the creation of group areas and on to community development, with the object of setting up dual governance with a dedicated local authority for coloureds.

## RICHMOND, THE APARTHEID TOWN

The DRC church played along, most likely without the application of any pressure as it supported segregation and played a "major part" in the implementation of apartheid<sup>4</sup>. It built a new mission church in the *onderdorp*, south of the Ongers River, while the historical building in Richmond was demolished. While no one notices its absence today, the square remains as a space, without activity.

It is difficult to access documentation of the 'group areas' intervention but the historical photos of Fagan suffice (2008). One can clearly see the development beyond the ford on the northern side of Pienaar Street, as well as the linear development at the foot of the *koppies* (hillocks) westward in what appears to have been a tightly integrated urban settlement. The first are fine examples of *brakdak* houses and stoeps, stepped in acknowledgement of the rising land, and the development westward, also mainly with *brakdakke* and not corrugated iron i.e. houses of the poor and probably self-built. Current day photographs which show the trees and stoeps prove the demolition, as do the floors of the westward expansion.



FIGURE 2 A row of stepped brakdak houses in Pienaar Street across the ford (Fagan, 2008: 179).



FIGURE 3 Remains of the stoep of the brakdak houses along Pienaar Street. (Photograph of 2013)



FIGURE 4 Pienaar Street looking east. Photograph of 2013.



FIGURE 5 Steetscape in the onderdorp (Photograph of 2013).



FIGURE 6 So called 51/9 houses given dispossessed parties in the onderdorp, south of the Ongers River (Photograph of 2013).

The apartheid government had decided upon an *onderdorp*, beyond the *koppies*, which rendered it invisible from the historical town, and the Ongers River conveniently served to reinforce the divide. It is here, south of Paul Street and distanced from the historical town that standard yet sub-economic houses were built for the dispossessed. Each dispossessed person was given a piece of land with a house, perhaps originally superior to the vernacular houses built westward but the replacements are alien in the Karoo setting. Different from the *Karoohuis* typology, these have brick walls and corrugated asbestos roof sheeting which maintain the heat of the day and provide none of the human comfort the indigenous variety is known for. Today exacerbated by rising damp, but from begin these houses bore the stamp of poverty.

It is difficult to imagine the scale or impact of the human tragedy of forcibly relocating people who had lived together as families, friends and neighbours, but, certainly, demolition of the housing stock in the late 1960s was totally unnecessary. All we know is that the westward development of vernacular houses was conspicuous. This fact and the fact that these buildings were occupied by coloureds was probably the most important reason for its demolition, with or without recourse to the Slums Act. The coloured community was disenfranchised and the allure of a new house a stone's throw away might just have tipped the scale for the town expeditiously to become re-ordered.

Twenty-two years into democracy numerous standard RDP houses have been built as have schools. What is more, the historical library in Loop Street was shut down and a new, state-of-the-art resources centre built in the *onderdorp*<sup>5</sup> while a site could have been chosen as a model for an integrated Richmond instead of persisting with apartheid planning principles.

## RICHMOND IN THE “NEW SOUTH AFRICA” & THE STUDENT PROJECT

The Group Areas Act was repealed in 1991 and the democratic ‘new South Africa’ emerged in 1994, but little has changed in Richmond, although the municipality became a shared responsibility with five towns, Hutchinson, Loxton, Merriman and Victoria West, some 80km distant!

But, in the 1970s already came an economic blow when vehicular traffic was diverted from Loop Street, the thoroughfare, to the new N1 national road, just north of the Vegkop hillock, parallel to town. While the diversion of heavy volumes of vehicles and especially trucks from the centre of town is to be welcomed, shielded from sight, the businesses felt the brunt.

It took outsiders to forge a new *raison d'être* for the town. Prompted by the dry climate which is good for the preservation of works of literature, during the 1990s a small coterie of townfolk stumbled on the branding of Richmond as a book town, which activities became located in former *tuishuisies* on Loop Street, the original dry erven. This, together with the visitor centre and the promotion of various festivals including the annual *Boekbedonnerd* festival in late October was the beginning of the revival of urban life in Richmond.

Observing the fruits of this initiative was the prompt for involving students of Architecture in the process. Equipped with an understanding of the historical and morphological basis for South African settlements and architecture, it is appropriate for students in their Honours year to come to terms with the art of townscape - the merging of history, topography, geography and the built environment - the context for most commissions in architecture. And, despite the politically driven demolitions, the unity of the surviving built environment of Richmond was not unattractive.

Interestingly, the voids created by demolitions or the vestiges of floors and stairs often do not register any particular association with today's students until historical photographs were found. It is then that the influence of politics came alive. However, understanding the forces of political vandalism and seeking confirmation from older residents is one thing; restitution and rebuilding in the ‘manner of today’ while conserving what the Group Areas Act has spared, is the design challenge.

No student ventured to propose rebuilding along the northward extension but a project on Pienaar Street across the ford saw the *brakdak* houses re-built, appropriately as an information and story-telling centre. Many students focused on the divide of the Ongers River and Paul Street with refurbishment projects, e.g. for agricultural skills teaching, a music or a culinary centre to empower the community with skills. Due to its position relative to the centre of town, a school for building trades was proposed for mission church square, while around Loop Street the emphasis on books lead naturally to a book and paper restoration centre; as did the safe house to focus on the social problems of the Karoo; and the absence of proper medial on a medial suite. In all cases, the function had been proposed by the students and the aim was to search for appropriate infill architecture.

While it was hoped to present a strategy for the conservation of Richmond's heritage, the compilation by the students is but a facet towards such objective, which would require a little more time than the curriculum could accommodate. The surveys and the ideas contained therein were thus presented as stimulation for further thought and action, the results of youthful enthusiasm with, hopefully, triggers for a new empathy with heritage.

## CONCLUSIONS

Though site specific, the morphology of Richmond shares the family resemblance of Karoo towns with a walled development of vernacular houses and a still working furrow system, with an intense and sustainable form of urban agriculture in some backyards, and the DRC church on its square remains unchallenged in providing the landmark after over 150 years. That townscape has proved itself resilient.

While Apartheid South Africa was obsessed in minimising social contact between different ethnic groups and separated citizens on a racial basis, the spatial separation shaped in terms of the Group Areas Act remains, despite the lifting of the legislation. This distance is difficult to counter; thus many of the student projects focused on the divide, with projects for the upliftment of the community, in which the historical townscape provided the context for the designs in conservation, restitution and re-building. Admittedly, it did take some time for the students to realise that they were, in fact, essentially dealing with what the Group Areas Act, 1950, had spared.

There are a great number of challenges facing the South Africa of today. One issue is racial and social integration, but for that to be effective, no act need be passed. Before the passage of the Group Areas Act, the Cape was without restrictions on ownership and occupation of land, and since 1994 the whole country enjoys such freedom. Within the small town of Richmond, perhaps the promotion of its remaining Karoo townscape alongside the festivals could serve as a basis for a peaceful and prosperous co-existence.

Walter Peters is an architect, architectural historian, conservator and editor of a professional journal. Before joining the University of the Free State in Bloemfontein in 2010, he uniquely rose through all academic ranks from Lecturer to Senior Professor at his *alma mater*, University of Natal, now KwaZulu-Natal, in Durban. He is the recipient of a Medal of Distinction of the South African Institute of Architects.

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## Endnotes

- 1 Walter Peters & Kobus du Preez, K (Eds) *Richmond 2013. A research study by students of the University of the Free State*. University of the Free State, Department of Architecture, 2013.
- 2 It was the imperial approach to naming towns in the colonies after a precedent in the motherland, but in this case, somewhat stretched, to the father-in-law of the incumbent governor, Sir Peregrine Maitland, the Duke of Richmond.
- 3 In 1857 the DRC church of the Cape had formally separated its white and coloured congregations, with the latter renamed *sendingkerk* (mission church) (Worden). This is the reason many Karoo towns sprout both a DRC church and a deferring DRC mission church. Little could be found on the original mission church of Richmond.
- 4 Nigel Worden, *A Concise Dictionary of South African History*, p.54.
- 5 The same was done for the new legislative assembly building of the Northern Cape Province in Kimberley, and though understandable, should one not capitalise on the best location, now that all of town is accessible to everyone, instead of reinforcing apartheid planning?

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# WATER CRISES MANAGEMENT IN MARSEILLE IN THE EARLY NINETEENTH CENTURY: SPECIFICITIES AND TEMPORALITIES OF SOCIO- POLITICAL ANSWERS (1800-1850)

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Until the mid-19th century, Marseille's water supply was problematic. And, in order to overcome the chronic lack of freshwater, solutions were always temporary and ineffective for supplying poor-quality water. Many river diversion projects planned since the late Middle Ages for providing a reliable resource to the city have failed, without real efficient management from the successive municipalities. However, as the issue became so pressing in the first half of the 19th century, it forced municipal officials to quickly address this problem. In this context, we explore adaptation and resilience of both urban and peri-urban communities to water scarcity at a micro-level at that time and socio-economic options that have successfully addressed ongoing supply problems. First, after describing the hydro-climatic context of the Provence area during the 19th century, we present both major social and economic crises in Marseille due to lack of water. Then, we analyze adaptation of households and neighborhoods together with public policy answers and challenging technical choices made to address chronic water shortages, mainly during the the design/building process of the new Canal de Marseille from 1838.

**Keywords**

Drought , 19th century, Marseille, Neighborhoods, Households, Water supply, Resilience, Management





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# CITIES UNDER SIEGE: THE FLOOD OF 1931 AND THE ENVIRONMENTAL CHALLENGES OF CHINESE URBAN MODERNIZATION

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This paper explores the relationship between China's urban modernization and the resultant environmental vulnerabilities revealed in the 1931 flood. One fourth of China's population was affected by this flood, which is believed to be the deadliest such disaster in 20th century China. The conventional view of the flood as a 'natural disaster' mainly caused by bad weather conditions does not persuasively explain why key urban centres along the Yangzi appeared unusually vulnerable and suffered such great losses. The paper takes the worst affected urban region in 1931—Wuchang, Hankou and Hanyang—as its focus. It explores how a new political regime changed the region's economic focus from agriculture to commerce, which led to the urban growth that weakened the traditional flood prevention system. In addition, the birth of 'the developmental state' and social reconfiguration after 1927 created a drastic rupture in water control policy and practices. The concentration of power in the technocratic officials of the revolutionary government led to the decline of organizations and groups that formerly played a key role in water control at the local level.

#### **Keywords**

The 1931 floods, water control, urban modernization, regime change

#### **How to Cite**

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## INTRODUCTION

The 1931 floods are generally remembered as the deadliest natural disaster ever recorded in 20th century China. Among the worst affected urban regions in 1931 was a metropolis complex called ‘Wu-han’, which consisted of Hankou, Wuchang and Hanyang. Located at the confluence of the Yangzi and the Han River, these three cities served as the commercial, political and industrial centre of Central China. The flood in 1931 turned the region known as ‘China’s Chicago’ into ‘the Venice of China’ with over half a million people losing their homes. The catastrophic result is conventionally believed to have been caused by ‘exceptional natural conditions’—abnormal rainfall over three months, the historic high water record of the Yangzi, and the topographical features of the three cities<sup>1</sup>. However, this explanation does not answer why the key urban centres along the Yangzi appeared unusually vulnerable and suffered such unprecedented losses in 1931. With flooding as an ever-present threat the region had developed flood prevention schemes that had proved to be reasonably effective in earlier times but seemed defenceless in 1931. It is ironic that these cities became more vulnerable to the threat of flooding after undergoing their most extensive modernization since the late nineteenth century.

This paper explores the relationship between China’s urban modernization and the resultant environmental vulnerabilities revealed in the three cities of Wuchang, Hankou and Hanyang during the flood of 1931. Tracing the political and economic shifts of the cities over a half century, the paper shows how modern urban development and revolutionary zeal weakened the traditional flood prevention system of the cities, which led to the disaster. The shifting focus of the late Qing regime from agriculture to international trade started an urban developmental pattern incompatible with the traditional flood prevention design. This pattern continued in the Republican era, when the birth of ‘the developmental state’ and social reconfiguration after 1927 created a drastic rupture in the government policy and societal practice of water control. The concentration of power in the technocratic officials of the revolutionary government and technocratic officials led to the decline of organizations and groups that had formerly played a key role in water control at the local level.

## URBAN SETTING OF WUHAN’S CITIES BY THE LATE QING

The three cities of Wuchang, Hankou, and Hanyang, which straddle the Yangzi River at a middle course, dominated the economic and political life of the central Yangzi River region for well over a millennium. By the late Qing era each of the cities had developed a distinct identity and function. Wuchang, as the Hubei provincial capital and a seat of the Huguang governor-general, was the most important administrative city of Central China. Across the Yangzi River, Hanyang ranked second in administrative status, serving as both a prefecture and a county capital. Hankou, which became a treaty port in 1861, had grown to be the major competitor to Shanghai for the Yangzi commercial trade. The administrative and economic importance of the three cities lies in their unique geographic location. First, they stood at the confluence of the Yangzi and its largest tributary—the Han River—and served as a gateway to the vast plains of Huguang. More importantly they formed the hub of a gigantic drainage system extending far beyond these plains that constituted a centre of communications for almost three-fourths of the territory of China proper<sup>2</sup>. It is no wonder that China’s revolutions of the twentieth century thrust the three cities onto the centre stage of national politics, as the birthplace of the Republic of China in 1911 and as its temporary capital in 1926-1927 (figure 1).

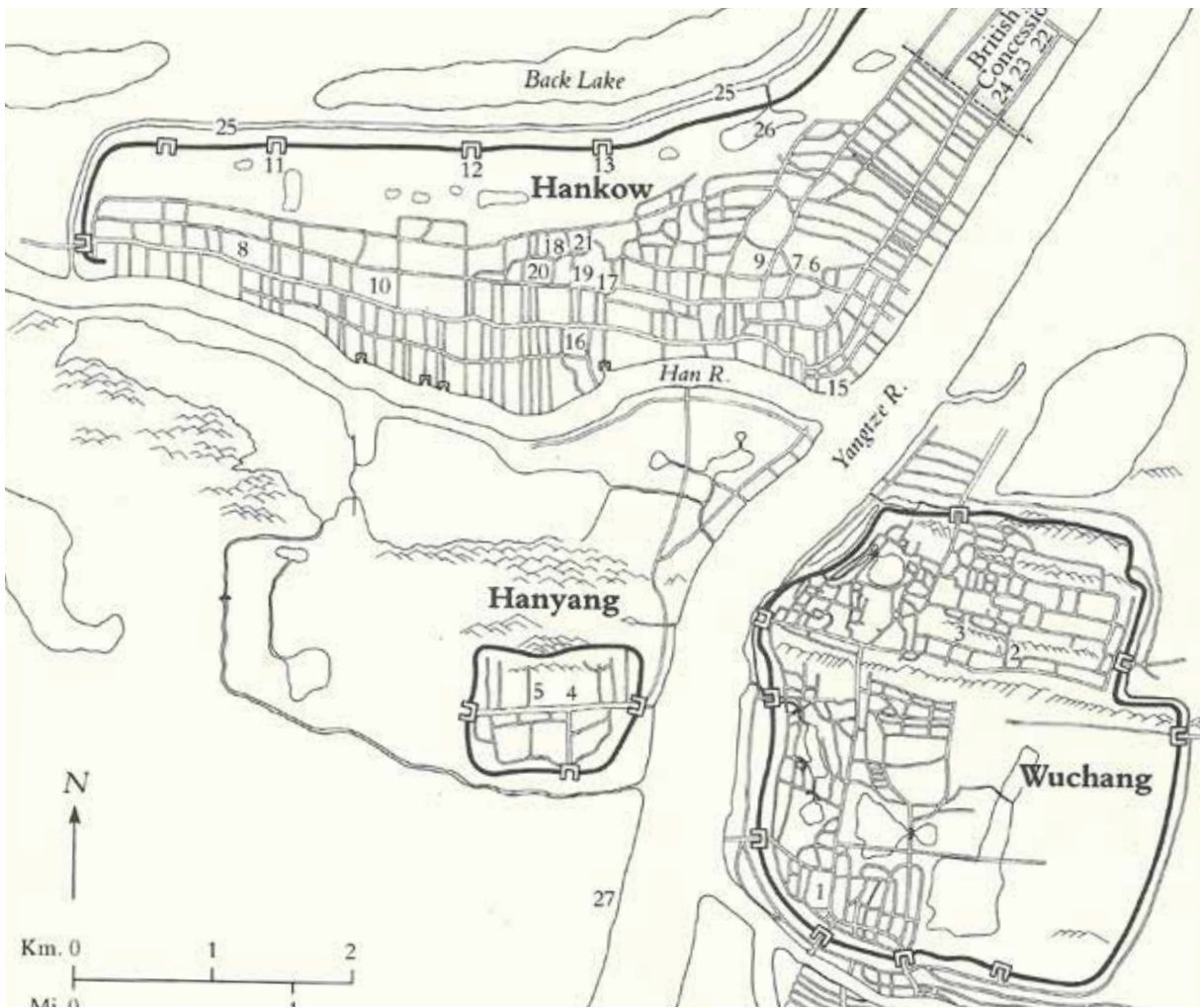


FIGURE 1 Map of Wuchang, Hankou and Hanyang in The Late Qing Era

A combination of broad flat plains and powerful waterways was the chief topographic feature of the region (figure 2 and figure 3). The threat of rising waters inundating the cities had led to the development of various measures to prevent and mitigate the impact of floods. In Wuchang and Hanyang the key structural measure was the construction of the city wall and moat system<sup>3</sup>. The rectangular city walls of the two cities were built in the early Ming period with waterproof clay and brick<sup>4</sup>. Floodgates were installed under the city walls to allow water to flow out into a surrounding moat<sup>5</sup>. The moats were composed of both natural waterways and artificial canals that connected the lakes and ponds within the cities to the networks of local waterways outside the walls<sup>6</sup>. Surprisingly large proportion of the urban land inside the walls were covered by lakes and ponds in Wuchang. A old saying described Wuchang as the city of ‘three mounds, eight springs, nine lakes’<sup>7</sup>. The numbers were inaccurate but they give a sense of the great scale of the reservoirs maintained by the city for the purpose of water supply and drainage. During emergencies the wall and moat system allowed water to be released into large lakes outside the walls and into the Yangtze downstream from the city.



FIGURE 2 Lakes and Waterways Outside The Walled City of Hanyang



FIGURE 3 Lakes Outside The Walled City of Wuchang

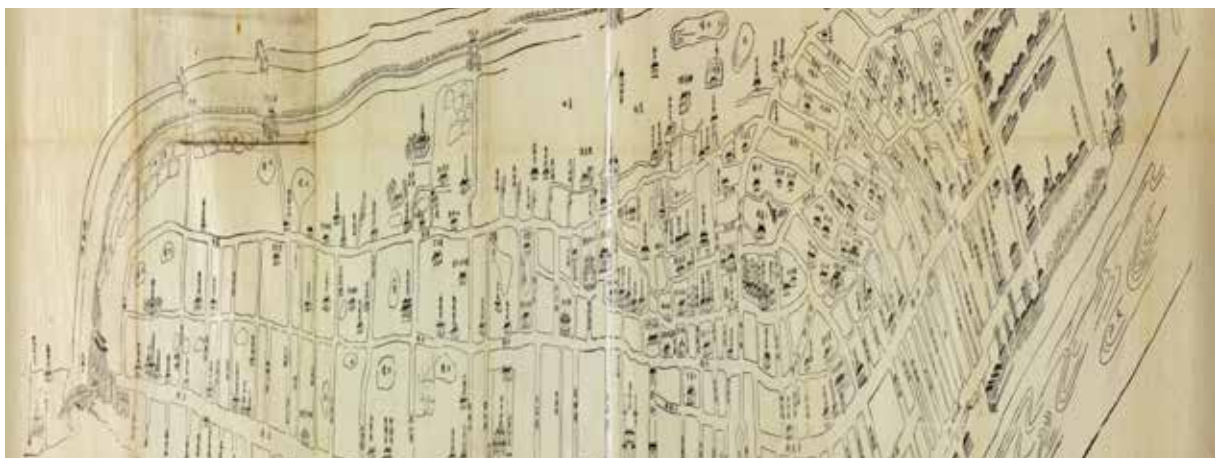


FIGURE 4 Map of Hankou in 1877 showing the city protected by Hankou bao, a flood-prevention wall.

The commercial city, Hankou, was different. As a non-administrative city it was not truly “founded” in any official sense and thus not subject to the rules of classical urban planning and construction. But flood prevention remained equally if not more important to its urban development. The city came into being around 1465 in the Ming dynasty, when the Han River suddenly shifted its lower course and created a liver-shaped sand island that later became Hankou. In high water seasons the town was bounded on all sides by water. The Han lay to the south and the Yangzi to the east. On its landward side the town was belted by a heavily diked canal and a tributary of the lower Han. Slightly beyond the canal lay the large backwater pool known as Back Lake (Hou-hu), a formidable reservoir capable of overflowing its banks and inundating the town from behind. To protect Hankou and its market, two dikes had been built along Back Lake. One was built by Subprefect Yuan Chang in 1635, stretching 10 miles from Qiaokou along the Han River in the west to Dikou near to the confluence of the Han and the Yangzi in the east. The other one, *Hankou bao*, was built in 1864 after the city was demolished by the Taiping rebellion. This dike was designed to perform the same functions as a city wall—both military defence and flood prevention. The *Hankou bao* had 8 doors, 15 forts and 3 floodgates that worked effectively to protect Hankou from both invasion and inundation (figure 4)<sup>8</sup>.

The design of all three cities shows that traditional urban planning often utilized natural resources like rivers, lakes and wetlands as an essential part of water control measures. There were numerous lakes, lowlands and swamps outside Wuchang, Hankou and Hanyang functioning as reservoirs to ‘store the water pumped or siphoned

from the Yangzi<sup>9</sup>. Their importance for flood prevention had long been understood by local officials who had specific responsibilities for managing the system during times of both high and low water. These officials carefully surveyed lakes and kept records on changing conditions. Moreover provincial and local officials limited human activity in the natural storage wetlands between the Yangzi and the cities of Wuchang and Hanyang, routinely banning unauthorized farming and dike construction<sup>10</sup>. As the Viceroy E'mida explained in 1744 'I believe the effective water control measure entails the principle of not competing with water for land ... natural lakes and waterways should not be blocked in preventing disasters caused by overflowing<sup>11</sup>'. In other parts of the Huguang plain rapid population growth led to an increase in land reclamation which dramatically reduced the number of lakes and wetlands. But until the late Qing era, official policies of the three cities at the confluence of the Yangze and the Han were effective in preserving the region's lakes and wetlands and preventing major damage from floods<sup>12</sup>.

## URBAN DEVELOPMENT UNDER ZHANG ZHIDONG'S MODERNIZATION IN THE LATE QING

However, for the last two decades of the Qing dynasty these traditional urban water control systems were increasingly challenged by reform-minded officials like the governor-general Zhang Zhidong (1837-1909). Zhang arrived in Wuchang in 1889 with the goal of strengthening the interior cities against Western imperial expansion. To Zhang the building of Hankou as a treaty port through the Western technology and design was particularly inspiring. The process transformed a vast unoccupied riverfront into a bustling urban centre that was seen as 'one of the finest examples of the Chinese Bund in the Orient<sup>13</sup>'. Zhang Zhidong launched a series of new urban modernization projects that valued the commercial role of water storage areas rather than their flood prevention function. This was part of a larger post-Opium Wars shift by Chinese governments away from the traditional focus on agriculture to a new emphasis on building a modern industrial economy.

The first project Zhang undertook was building the Hanyang Ironworks, the largest of its kind in Asia, on a vast marshland north of Hanyang. Despite being warned about the danger of floods, Zhang insisted on reclaiming an area of lakes and wetlands twice larger than the city of Hanyang itself<sup>14</sup>. Reclamation alone cost over one million silver dollars—one fifth of the total cost of the entire project. In the following years more industrial enterprises were established on the reclaimed land and as a result the city proper extended far beyond the city walls. In 1899 Zhang built two massive dikes along the Yangzi outside Wuchang, which led to the reclamation of more than 60,000 mu (about 9884 acres) of land for Wuchang's future urban development<sup>15</sup>. In 1906 Zhang completed another major reclamation project, the Zhanggong Dike in Hankou. It was initially designed to protect the Beijing-Hankou railroad from floods, but Zhang saw it as an opportunity to pursue more space for Hankou's further urban development. The dike drained a vast land of about 20 times larger than the original size of the city<sup>16</sup>. Soon after the completion of the Zhanggong dike, the old *Hankou bao* lost its function and was turned into Hankou's first modern road. This new *Zhongshan Road* facilitated major growth in communication and commerce, and the city proper of Hankou grew far beyond its original boundaries.

Zhang's urban projects conflicted with the previous policy and philosophy of flood prevention, the projects drew criticism from local gentry and community leaders. Fu Qihao a low-ranking official of the Jiangxia County, worried that the land reclamation and dike construction would increase the chance of flooding<sup>17</sup>. The shrinking of the natural water storage zone and reservoir lakes forced Zhang to rely more upon artificially-constructed measures of urban flood prevention. At Wuchang he first added four floodgates under the two dikes to allow water to move more freely between the Yangzi and its reservoir lakes. He then surveyed the existing drainage within Wuchang, dredged ditches, and repaired and installed floodgates and locks<sup>18</sup>. As a result the drainage of northern Wuchang was greatly improved because city water could be released either through floodgates into the Yangzi or through the repaired northern moat to enter into a big reservoir lake in the West<sup>19</sup>. Zhang also

worked with local community leaders and social organizations like benevolent halls to ensure effective flood control. They were encouraged to act as policy educators and implementers and took responsibility to report on blockage of key waterways, illegal land clearance, and unauthorized dike construction at the local level<sup>20</sup>. Some social organizations even participated in community flood prevention activities like annual dike repairs, waterway dredging, and floodgate maintenance<sup>21</sup>.

## URBAN DEVELOPMENT IN THE REPUBLICAN ERA

Zhang Zhidong did not get a chance to witness the full development of the newly annexed urban lands in the three cities because the Qing dynasty collapsed in 1911. With no strong government regulation Hankou experienced a rapid development, much of it on land previously reserved for flood control. Chinese merchants expanded their businesses. The completion of the Lu-Han railway (China's first South-North line) in 1906 also stimulated the economic development of Hankou, whose trade volume soon exceeded all other treaty ports except Shanghai. The city's population tripled from 1921 to 1931 and the majority of the newcomers occupied newly drained land near the Zhanggong dike. In the first ten years of the Republic there were more than two thousand residential and commercial buildings built between the Zhongshan Road (the dismantled *Hankou bao*) and the Lu-Han railroad<sup>22</sup>. The drained land thus became a new bustling urban centre of Hankou, where famous Chinese business like the Great Hankou Hotel, the Ye Kaitai Drugstore, and the New Market (an entertainment plaza) and foreign factories like the Mistui leather factory and Jardines were located<sup>23</sup>. Some urban projects, such as the Chinese Race Club, the International Race Club, the Hankow Race Club, an airport, the Zhongshan Park, and the Union Hospital were even established beyond the protection of the railroad embankment.

However, the private and profit-driven development of Hankou further weakened its flood prevention capacity. The drained area upon which the new urban centre was established had a much lower altitude than the average land level of Hankou. According to the customs report of 1902-1911, the reclaimed area outside the *Hankou bao* needed to be lifted up at least 20 feet on average to be used for any urban construction. For some low-lying areas a need to raise the land more than 40 feet was not unusual<sup>24</sup>. But merchants were often concerned more about how to save costs than about making sure they built on safe ground. Moreover, the absence of a strong local government in the early Republic era made it hard for Hankou to have a comprehensive urban plan that focused on the flood control issue. Because of the problematic land configuration and the poor drainage of Hankou the new urban area was notorious for streets 'full of filthy water'—even when there was no rain<sup>25</sup>.

Further major change occurred in Wuchang and Hanyang after the Northern Expedition in 1926, when the Nationalist government took Wuchang as a temporary national capital on its way to unifying China. The new leaders directed their zealous ambition to break with the imperial past into urban reform projects, which unfortunately led to serious damages to the traditional water control mechanisms of the two cities. In October 1926 Hubei provincial government made a decision to dismantle the city wall of Wuchang because they saw it as 'a relic of the feudal past<sup>26</sup>'. Two years later the walls of both Wuchang and Hanyang were torn down. The demolition of city walls unavoidably damaged other flood protection systems. For instance, the Qixin floodgate and the Wannian floodgate got clogged due to the wall demolition and became completely broken when a new road was built upon the site of the wall. Meanwhile the Wuchang municipal council ordered that the lakes within and outside the city be filled to make more space for urban construction. From 1927 to 1931 the size of the lakes in Wuchang were rapidly decreased. Comparing maps in 1868 and 1930 it is clear that lakes and waterways that were part of the western city moat were greatly shrunk. One of these, the Chang Lake, nearly vanished (figure 5)<sup>27</sup>.



FIGURE 5 Wuchang, Hankou and Hanyang in the 1915

Aware of the potential danger of flooding, eighty-four representatives of the philanthropist association of Wuchang wrote a petition letter to the Hubei provincial government. They expressed concern that the revolutionary urban reconstruction would seriously damage Wuchang's flood prevention system, whose function had already been largely reduced by Zhang Zhidong<sup>28</sup>. The letter was accompanied by a report on the drainage system and official regulation of the late Qing era in order to remind revolutionary officials about local water control practice and history. Unfortunately, this request was ignored by the provincial government. 1927 marked a rapid decline of community influence over local governance and affairs. Much of the autonomy of the local community was taken away by the municipal government which discouraged the community's involvement in flood prevention. The 'developmental state'—a term used by William Kirby to describe the technocratic confidence in national construction during the Republican era—chose to trust centrally appointed and western-trained planners and engineers, not local leaders, for urban water control works. When most new technocratic officials proved uninterested learning about local situations and the collaborating with the local community, it became impossible to preserve or use the traditional water control system. It is no wonder that Wang Baoxin, a local historian, lamented the loss of historical knowledge about the old cities and warned of disastrous consequences from the urban modernization programs<sup>29</sup>.

## CITIES UNDER SIEGE: THE FLOODING OF HANKOU, WUCHANG AND HANYANG

The process by which the three cities were flooded in the summer of 1931 revealed that their vulnerability was the result of urbanisation and political shifts. The first sign of flooding in Hankou occurred on drained lands near the Zhanggong dike when residents reported water coming out of a lake that had been filled in. Then on July 28th the dike along the Yangzi burst, flooding the drained land where Chinese Race Club, the Union Hospital, the International Race Club, and the Recreational Ground were located. A new commercial centre located on drained land between the old market of Hankou and the foreign concession remained dry at first because of its relatively high level and the protection of the railway embankment. However, because of the reduced water storage capacity of Back Lake, water eventually broke through the railway embankment on August 2nd, inundating the entire area. By this time all the land drained since the late Qing era was completely restored to its original state as part of the Back Lake. In contrast both the old market of Hankou and the foreign concessions were able to keep the water out until August 19th when the river reached its historical peak at 28.28 meters in Hankou. At this point all the foreign concession and most of the old market town were flooded. As the focus of urban development and investment after the late Qing the new urban district contributed to the severity of the loss in Hankou. The damage was worst in the new commercial district, where floodwaters ripped up residential and industrial buildings, damaged roads and smashed bridges. The fact that the district was built upon low lying ground with no effective drainage system prolonged its suffering. It took over three months to completely get rid of the water.

As for Wuchang, in late July the failure of the Wutai dike allowed the water of the Yangzi to enter the suburb of Wuchang, increasing the water level of most nearby lakes<sup>30</sup>. Outside the city walls the Kuaizi Lake, which had been decreased in size and capacity in the 1927 urban reform, finally overflowed in mid-August. Floodwater broke the Kuaizi dam and entered into the northern city moat, parts of which had been blocked and thus could not direct water into the storage area behind the city. Wuchang literally became a besieged city surrounded by floodwater. Ironically the last line of defence consisted of the relics of the old city wall and its damaged foundation. On August 21st the Hubei provincial government formed the City Wall Flood Defence Committee to 're-build' the city wall with bricks and sand bags. This was hard to carry out because the wall foundation was found to be too 'loose' and 'fragile'<sup>31</sup>. In the late August floodwaters finally broke through the city wall defence and inundated two thirds of Wuchang<sup>32</sup>.

In Hanyang the first flooded area was the industrial zone constructed by Zhang Zhidong on the lakes and swamps near the Han River. By the middle of August all the factories including the Hanyang Iron Works and the Hanyang Arsenal were fully underwater, about 6 chi (2 meters) to 2 zhang (6 meters) in depth.<sup>33</sup> The financial loss was severe, for the industrial zone of Hanyang was the most expensive investment of the late Qing government.



This was soon followed by the inundation of the city centre of Hanyang, whose flood defence capability was largely lost with the demolition of the wall and moat system. Except for its north corner, the entire city was submerged under 4 chi (1.3 meters) of water<sup>34</sup>.

## CONCLUSION

A historical review of the urbanisation of the three riverine cities along the Yangzi shows that their inundation during the 1931 flood was more a human-created disaster than a natural one. It was caused by disregard for the natural environment and damage to traditional flood prevention systems. This reveals major flaws in the modernist urban vision that began in the late Qing era and continued through the Republican era. This vision centered on the rise of a centralized governmental structure and policy, a shift of economic emphasis from agriculture to trade, and a blind confidence in using modern technology to gain mastery of nature. Since China's current vision of urban modernity continues to break with tradition and concentrate power in the central state rather than in society, the flood of 1931 has a continuing relevance for today.

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## Disclosure Statement

No potential conflict of interest was reported by the author.

## Notes on contributor(s)

Zhiguo Ye is assistant Professor of history at Seattle Pacific University. Her research interests include the socioeconomic and cultural history of modern China, Chinese urban history, and environmental studies.

## Endnotes

- 1 This view dominated official flood reports in 1931, such as Xie, *1931Hankou dashui ji*, the Hubei disaster relief committee, *Hubei 1931 shuizai dang'an xuanbian*, and many other government reports in the republican era. Extensive current scholarship on the flood in China continues to share the same view. See in Li, *zhongguo jindai shida huangzai* and Zhu, "1931nian Hankou shuizai shulun," 104-111.
- 2 Rowe, *Hankow: Commerce and Society in a Chinese City*, 17.
- 3 China's traditional urban water control and flood prevention design has been carefully explored by the studies on imperial cities like Beijing, Chang'an, and Nanjing. See Wu, *Zhongguo gudai chengshi fanghong yanjiu* (*zhongguo jianzhu gongye chubanshe*, 1995); and Feng, "shuitang shiqi chengshi paishui xitong jiangou jiqi dangdai jiazhi," 66.
- 4 Due to different standing in official hierarchy, Wuchang had a longer wall (about 10 kilometers) and enclosed a bigger area. Hanyang's city wall was only about 2.5 kilometer.
- 5 There were nine floodgates installed under Wuchang's city wall and three under Hanyang's.
- 6 The moat of Wuchang was about 11000-meter-long, 9-meter-wide and 7 meter deep.
- 7 Pu, "Wuchang chengqu hutang zhi yanbian," 11.
- 8 Pi. *Hankou Wubai nian*, 68.
- 9 See 'lake survey' in Hu, *Jinchu xiushu zhiyao*, 257.
- 10 Yu, *Chubei shuili difang jiyao*, 162.
- 11 *Ibid.*, 107.
- 12 Yin, *Mingqing lianghu pingyuan de huanjing bianqian yu shehui yingdui*, 79. And Yin, "cong mingdai hebo suo de zhifei kan hupo fenbu ji yanbian," 27-39.
- 13 Möllendorff and Li, *jindai wuhan jingji yu shehui: haiguan shinian*, 197.
- 14 Yuan, "Sheng Xuanhua yu hanyang tiechang zhi zai buju," 124-127.
- 15 Zhang, *Zhang Zhidong quanji*, vol. 56, 1478.
- 16 Wuhan shi wenshi xuexi weiyuan hui, *Wuhan wenshi ziliao wenku* 武汉文史资料文库, vol. 3, 457.
- 17 Zhang, *Zhang Zhidong quanji*, vol.166, 4804-4805. Zhang, *Zhang Wenxiang gong quanji*, vol. 4, 2175.
- 18 Zhang, *Zhang Zhidong quanji*, vol. 154, 4379.
- 19 Hubei Archive, *Hubei sheng 1931 shuizai dang'an xuanbian*, 249.

- 20 Zhang, Zhang Zhidong *quanji*, vol. 154, 4382.
- 21 Zhang, Zhang wenxianggong *quanji*, vol. 3, 1998 and vol.4, 2222, 2223.
- 22 Pi, *Hankou Wubai nian*, 127.
- 23 Möllendorff and Li, *jindai wuhan jingji yu shehui*, 131.
- 24 *Ibid.*, 103.
- 25 Hankou Municipal Government, *Hankou shi zhengfu jianshe gaikuang*, 33.
- 26 Hubei provincial government, *Hubei zhengfu gongbao*, 13.
- 27 Pu, 'Wuchang chengqu hutang zhi yanbian', 11-17.
- 28 Hubei Archive, *Hubei sheng 1931 shuizai dang'an xuanbian*, 249.
- 29 Wang, Xu *Hankou Congtan*, vol. 2, 9-10.
- 30 Hubei Archive, *Hubei sheng 1931 shuizai dang'an xuanbian*, 3.
- 31 *Ibid.*, 266. See telegraphs from the Bureau of the Construction on August 18<sup>th</sup> in 1931.
- 32 *Ibid.*, 4.
- 33 *Ibid.*, 291.
- 34 Pi, *Wuhan tongshi*, 213.

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Figure 1: William Rowe, *Hankow: Commerce and Society in a Chinese City*, 22.

Figure 2: Wuhan shi, *Wuhan lishi ditu ji* 武汉历史地图集 (The Historical Atlas of Wuhan), (Beijing Shi: Zhongguo di tu chu ban she, 1998), 10.

Figure 3: Wuhan shi, *Wuhan lishi ditu ji*, 19.

Figure 4: Library of Congress Geography & Map Division digital ID (g7824h.ct003066)

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# FLOODS AND EXTENSION PLANS: DISCOURSE AND PROJECTS IN SOUTHERN BRAZIL

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This paper focuses on four extension projects on floodable areas in the city of Porto Alegre, in the State of Rio Grande do Sul. The city is in the Jacui River delta, which flows into the Guaiba Lake, one of the main waterways in Southern Brazil. Such urban projects – with similar goals amongst themselves, such as integrating housing and industries, for instance – were never implemented. However, as initiatives associated to state economic and strategic development plans (between 1935 and 1960), the study of such projects significantly contributes to the understanding of Porto Alegre's trajectory of expansion. The Jacui delta and its islands limit Northern Porto Alegre. The projects were to be located on such wetlands, given their strategic site in relation to means of external connection, such as waterways, roads and railways. Because this area had always been subject to floods, a solution for overcoming such issue with infrastructure works was always present in the creation of projects for the delta. Porto Alegre, from its foundation to the first half of the 20<sup>th</sup> century, suffered with floods of the Guaiba Lake that caused major damages to the city. Because of that, from 1942 through the 1970s, a levee and a wall were built; to this day, they influence the connection between city and Lake, maintaining the collective memory of past floods. Therefore, this work focuses on the different approaches and discourses of the authors of the extension projects for the flood issues, and on their intentions towards making such projects resilient to the recurring floods. While researching the plans, we have observed that the cost of construction work and of the expropriation needed for building the levee has contributed to postponing, deterring and modifying the execution of such projects. In spite of the failure on implementing the projects, their focus on the relation between the city and its surrounding waters became an important resource for the study of the city's history, given that the wetlands are a significant part of its collective memory.

## **Keywords**

extension plans; resilient projects; industry; housing; city history.

## **How to Cite**

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## INTRODUCTION

On the first half of the 20th Century, Brazil sought to consolidate industrialization and implement its manufacturing industry, by promoting a series of plans and actions. The industry-based development goal allowed for many projects for industrial cities or urban nuclei to happen, congregating both production and housing. Porto Alegre, capital of the state of Rio Grande do Sul, participated on this process by proposing four projects at different times. Two were private – the *Gravatái Wetlands Plan* (1935) and *Benopolis* (1949) – and the other two were public – the *Jacuí Delta Plan* (1958) and the *Porto Alegre Industrial City* (1961). The works intended to structure industry as means for economic development whilst interacting with housing as an increasing demand from society.

The main aspect that connects these works and characterizes them as a set is not only their common goals, but also their location in rural or suburban floodable areas alongside the *Guaíba Lake*: the *Gravatái River Wetland*; part of the city of *Guaíba* and the islands on the delta of four rivers – *Jacuí*, *Cai*, *Sinos* and *Gravatái*. The location was strategic in all projects, for it congregated or encouraged most connections within the city of Porto Alegre: the railway, the port, the roads and the airport. The city, however, often suffered from floods throughout the region and on the already settled industrial neighborhoods where most industries and housing for the working class were. The flooding events were in the local newspapers, which showed and described the factories' great losses and the suffering of the working class.

In spite of that, projects for the floodable areas of the *Gravatái Wetlands* and the river delta continued to be designed, for those were the city's future expansions. These projects were object of other works, in which we sought to analyze their urbanism references and the political and economic relations during the time of their making.

The impact of the floods in Porto Alegre and region has always been a recurring issue. Only in 1970 would it have a solution with the levee construction. We emphasize that the history of flooding has always been treated by its social impact and its economic losses with photographs and reports<sup>1</sup>. The relevance of this work focuses precisely on eliciting the sequence of projects that pursued solving the flood problem considering the purpose of the region's economic and strategic development. In this work, we focus on the always present relationship between the projects and the water, from means of production transportation to agent of the devastating floods: we analyze the approach of each author (or group of authors) for solving the floods problem, the conditions that influenced each of them and the attempts for implementing them.

## THE PRIVATE INITIATIVES' PROJECTS

The first urban project to combine housing and industry was to be located around consolidated industrial neighborhoods North of Porto Alegre, on a broad floodable area on the confluence of the *Gravatái River* and the *Guaíba Lake*, called the *Gravatái Wetlands*. Large part of this area corresponded to the rural area of the city, having been acquired by a group of industrial entrepreneurs on the 1920s. From the acquisition, they founded a real estate society focused solely on those lands.

In 1934, the society hired urban planner and municipal technician Luiz Arthur Ubatuba de Faria to design the project, its regulation and approval process with the local government.



FIGURE 1 Map of the city of Porto Alegre, 1935. Property of Gravataí Wetlands (in orange).

At the time, Porto Alegre's mayor was an industrial entrepreneur himself, Mr. Alberto Bins. He promoted several works in Porto Alegre, continuing not only those initiated by his predecessor Otávio Rocha<sup>2</sup>, but other works with core, structural functions in the city dynamics, such as a street paving plan for suburban areas and drainage systems. The associate proprietors of the Wetlands area were also industrial entrepreneurs; for them, hiring Ubatuba de Faria would be fundamental for intermediating such ambitious extension project with the municipality.

The project was finished by September, 1935, entitled "Project for an Urbanization Plan of an Industrial and Residential District at the Gravataí Wetlands". The author was responsible for "propaganda", promoting the project for the press to later add it to another city plan, called the Gladosh Plan, to be hired by the municipality in 1938. The intention of the partners was to plan the future of the Wetlands in consonance with the guidelines of the Gladosh Plan – a matter often mentioned<sup>3</sup> on the company records, along with the intentions to obtain support for the Wetlands Plan.

The press publicity for this project didn't focus on the land business, but on gaining the public administration for carrying the project on. Therefore, it was clear that even though the plan came from the private initiative, the support from the public sphere had to be obtained, for the area was too great (700 hectares), and the industry and housing functions required major – and expensive - sanitation infrastructure.

On the introduction of the plan, the author stated that the greatness of the Wetlands Plan didn't allow for it to restrain itself to the local design only, and should also deal with its connections to the city and to the future avenues<sup>4</sup>. The author defends that elaborating conjoint plans is necessary, and that the conditions of the city at the time had to be assessed before adding another cell<sup>5</sup> (Figure 2).

In 1936 and 1937<sup>6</sup>, the Wetlands Plan was part of two expos – a local and a national one – as an extension project for Porto Alegre. Ubatuba de Faria and his colleague, engineer Edvaldo Pereira Paiva, soon became responsible for a study for the city, edited by the municipality<sup>7</sup>, in which the Wetlands Plan was included. Therefore, the exchanges between public and private actors of urbanism at the time are very noticeable. If a private project counted on being added to the municipality's studies for its viability in one hand, on the other, the public promotion of municipal urbanism was made through this private project.



FIGURE 2 Gravataí Wetlands Plan, 1935. L. A. Ubatuba de Faria.



FIGURE 3 (Left) Channels of Gravataí Wetlands Plan.

On his introduction, Ubatuba also mentions that the area to be urbanized was subject to frequent floods, and that great work was to be done to fix the problem. When creating the plan, he proposed a wide industrial front along the river and lake, peripheral to the residential area. The industrial area was designed with retreating docks for ship berthing and access to railway connections alongside the Guaíba Lake and the Gravataí River. From this configuration, the engineer suggested that the land removed from executing such docks and the shallower portions of the river should be used as landfills, elevating the average level of the whole area. Drainage would be solved by inserting two water channels with aesthetic intentions along two designed main avenues, and then debouching to the Guaíba Lake (Figure 3).

Although not studied enough, we can verify the references of this design in those from engineer Saturnino de Brito<sup>8</sup>, still in the beginning of the 20<sup>th</sup> Century. The latter's urbanism principles were also determined by sanitation demands, a priority compared to others like circulation, security and aesthetics. This last aspect was not of all disregarded: in examples like the Santos Plan, in the Sao Paulo coastal area, the drainage channels were associated to an efficient road system, and sided by lateral walkways, the park avenues<sup>9</sup> (Figure 4).

The land company made the decision to finance Ubatuba's Wetlands Plan by itself in 1937. However, as we mentioned before, the company was careful about implementing the plan at the time Gladosh was hired, for the design still depended on his approval to be included to his city plan. Gladosh worried about excessive expanding of the city limits, especially due to the costs of a spread occupation, substantially demanding of infrastructure. He argued both the excessive centralization and spreading were harmful to the city; density limits should be adopted on the central areas and the expansions should be controlled.<sup>10</sup>

This was one of the main difficulties the Wetlands Plan would have when seeking support from the municipality, especially regarding the sanitation plan for the northern area of the city, which often suffered with floods and lack of drainage systems.



FIGURE 4 (Right) Channels in the Santos Plan, 1910.



FIGURE 5 Benópolis Plan, 1949. Channel and levee along the river. Cross hatched area: train station.

Even though the Gravataí Wetlands and the whole central area of Porto Alegre suffered with the Guaíba floods for years, the most significant flood happened in 1941, when the water reached a new high of 4,73 meters above sea level and affected forty thousand people. Transportation and other public services temporarily ceased, followed by long periods with no water or electric power<sup>11</sup>.

The Wetlands Plan was already being implemented in 1941. The flood caused the work to be interrupted and damaged the work already done, as well as the machinery on site. According to the company, the damages were too big for the urbanization works to continue. In addition, from that year on, the property went from rural area to being considered suburban. This caused its total area to be substantially reduced, because of a federal project to build an external levee, and because of the new installations for the Rio Grande do Sul Railways Company. By the end of the 1940s, with guarantees from the Federal Government that no expropriation of the levee-protected lands would occur, the company decided to propose a new project for the Wetlands, entitled Benópolis from of one of its partner, Benno Mentz.

The engineer and municipality technician Fernando Mendes Ribeiro was author of this 1949 project. When suggested Benópolis, he proposed a zoning tracing similar to the precedent Wetlands Plan: large blocks for industry and deposit functions were designed along the inner side of the levee, segregated by a central railway, while the residential area was limited by a wide and green contouring avenue. The overall tracing of the blocks and roads assumed the geometry of the levee designed by the Sanitation Division of the Federal Government<sup>12</sup> (Figure 5). Over the levee, they designed a road that would connect the city to the North of the state, with occasional elevated pedestrian ways for crossing. An enlargement to a channel nearby the Guaíba margins was proposed, connecting the so-called Saco do Cabral to the Gravataí River, improving its waterways.

The company negotiated with other Brazilian land companies and investors to implement this project; but the execution of the levee would be postponed for many years, therefore postponing urbanization as well.

On these private initiative projects, some points are relevant:

- 1 The intention for the continuity of a plan that aimed on solving local housing and industrial demands strategically;
- 2 The great amount of resources needed for the sanitation of the Gravataí Wetlands, which demanded support and investment from the public sphere;
- 3 The fact that, even with the authors' aid on inserting the projects in the municipality's urban planning agenda, the projects couldn't be carried out due to other factors – the flood of 1941 and the delay on the construction of the levee by the Federal Government.

On the second half of the 1930s, the city was focusing on the construction of underground channels for sewage and drainage on the Navegantes and São João industrial neighborhoods, adjacent to the Gravataí wetlands. Those were the first industrial neighborhoods in Porto Alegre, and their demands for sanitation infrastructure were frequently shown in the local press. The sanitation issue pressured the authorities to solve the floods issue on the northern area of Porto Alegre – which would only happen with the levee works and the pumping stations in the 1970s. The floods issue caused new estates to progressively develop in the suburbs and rural areas of the city, which promised to finally solve the sanitation problem for the factory workers along the river margins<sup>13</sup>. This situation generated an occupation process of the areas further away from the center and the Guaíba Lake, with poor or non-existent access to infrastructure networks.

## THE JACUI DELTA AND THE INDUSTRIAL CITY

In 1953, five years after the Benopolis Projects, the State Government and the Federal Government approved the roadway connection between the state's South and West, to enable development, economic integration and a connection to Montevideo (Uruguay) and Buenos Aires (Argentina). This roadway connection involved a system of bridges and landfills over the Jacuí River delta; hence, the State Government started focusing on planning for that area, to avoid uncontrolled settlements along the road (Figure 6).

The planning was object to a contest in 1957, under two different themes – the delta islands and the Guaíba city area. Urban planners Edvaldo Pereira Paiva, Roberto Felix Veronese and Carlos Maximiliano Fayet, all professors at the School of Architecture of the Federal University of Rio Grande do Sul, and architect Moacyr Moojen Marques, composed the winning team.

Just like in the Wetlands Plan, the whole area comprised by the contest project was floodable. Its geologic conditions were known through a study performed by the French company Neyrpic, which defined the occupation limits on both the continental part of the Guaíba city and the insular land of the seven delta islands.

The team relied on Neyrpic's assessment, and made a bold proposal to connect Porto Alegre to the ocean, with port areas on the delta that would provide substantial support to the industries located there (Figure 7).

The landfill's ideal level should be six meters above sea level – the same level intended for the road. However, the team realized it would be expensive to fill up to this height, even if partially. Having then defined that the continental portion of the project and certain portions of the islands would be the most favorable for occupation according to Neyrpic's assessment, they proposed landfills up to three meters on lower levels, and peripheral levees at six meters high. They had decided, however, that the landfills would be done in steps, and that the levees would be built as the landfills were being occupied.



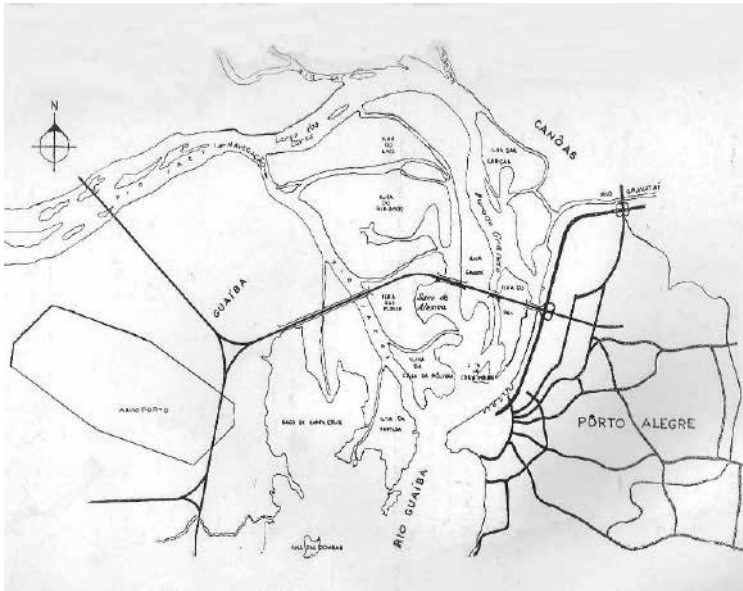


FIGURE 6 Road, islands and the Jacui Delta next to Porto Alegre.

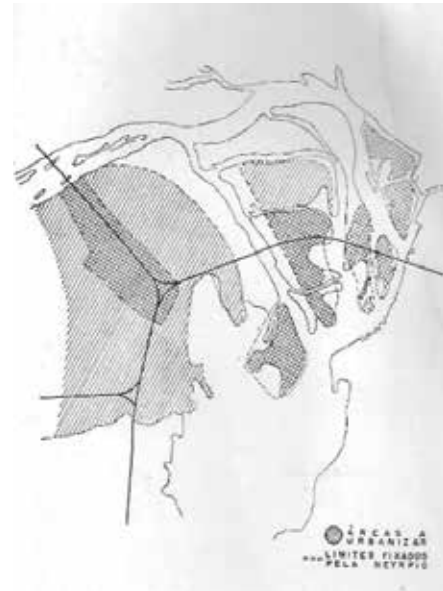


FIGURE 7 Occupancy limits of Neyrpic and urban development areas.

This pilot plan sought to establish an occupation plan or “main guidelines, within which growth will occur”, defining that “the social class to occupy these new extensions would be the industrial working class”<sup>14</sup>. The authors wanted the residential areas to be as near as possible to the industrial strings.

There was also a zoning tracing, a road system and a system of green public areas within the Neyrpic limits. Outside such limits, there weren’t to be urban lots; such areas should be left for cattle breeding and farming, dock rental and fishing establishments.

The industries, which required water transportation, could occupy the islands; however, those to be secured from the floods should be a great distance away from the margins. Regarding the residential area, the idea was to form nuclei of “neighboring units”, which would restrict the size of the residential areas according to walking distance to schools, public support facilities and sports areas<sup>15</sup>. In reality, the occupation would be regulated by a law proposed by the pilot plan itself, to guide the execution of the land subdivisions by private agents (Figure 8).

For this plan, the authors focused on the design for the main area of the project, in the city of Guaiba. It would be located alongside the industrial string and close to a railway, protected by a levee. The residential areas would be limited by the airport and the Jacui River lower areas. The center for the “satellite city”, as they called it, was detailed in a plan and perspective drawings, showing the congregation of main urban facilities and a civic center. Surrounding this area, the swampy regions were to be sanitized to be occupied by residential units.

The occupation of the islands was not as detailed as the continental occupation. The authors remained within the Neyrpic limits, and suggested the occupation of the island centers with housing and industry. At the Pintada Island, however, the plan proposed a port to support the area’s factories and warehouses.

From the text, it was clear that the occupation of the islands was to happen only after the consolidation of the city to the continental portion of Guaiba, because of the expensive landfills required on their lower areas. At the same time, the road for accessing the city expansion was fundamental for the full project’s development (Figure 9).

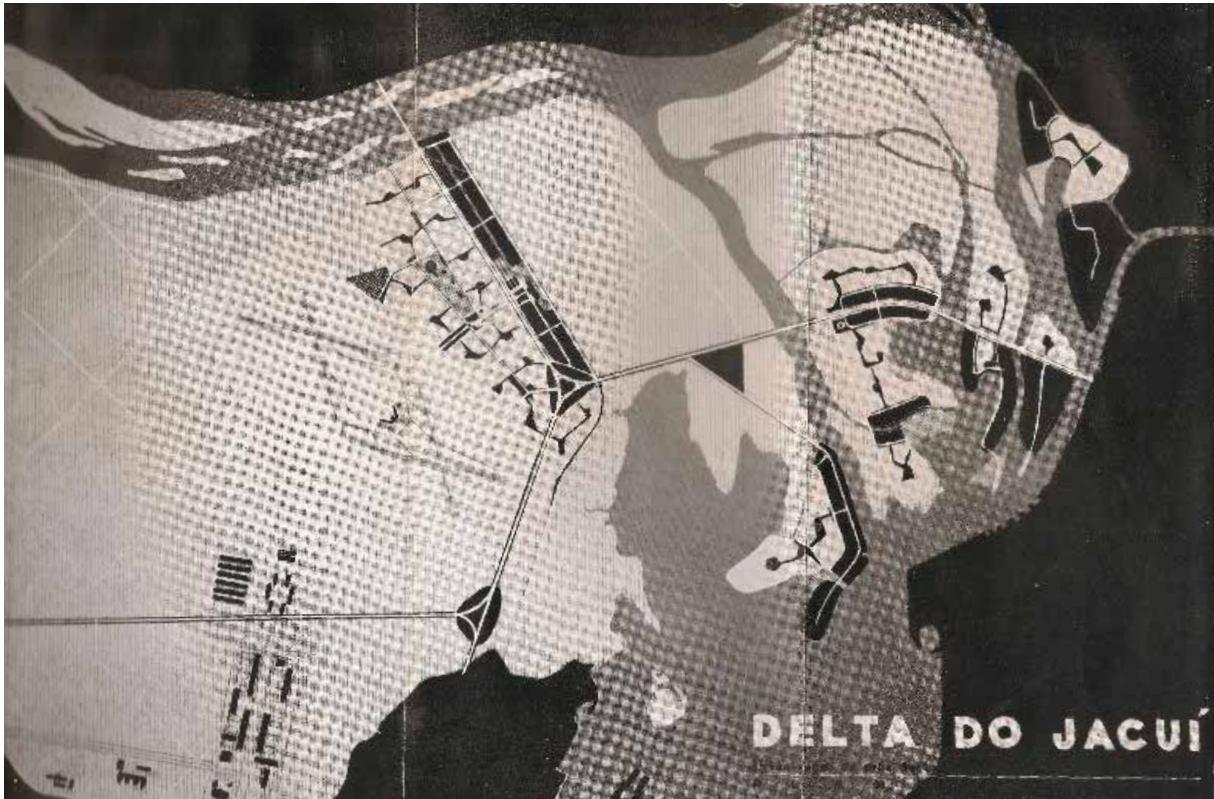


FIGURE 8 Delta do Jacuí Plan, 1957

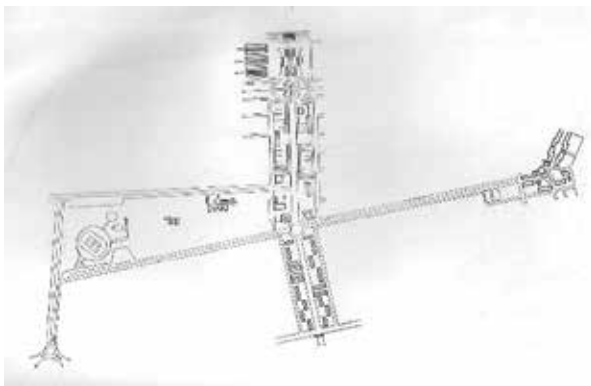


FIGURE 9 Central area of the Jacuí Delta Plan.

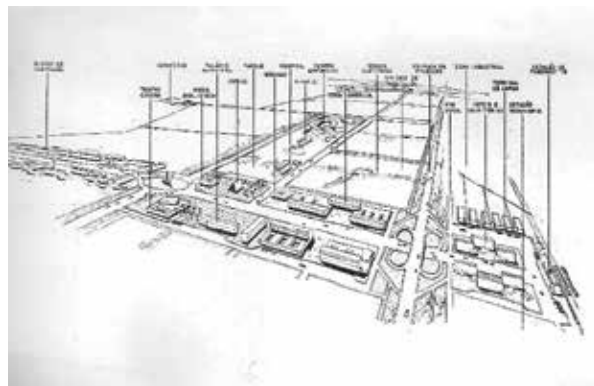


FIGURE 10 Perspective from the central area of the Delta.

The Jacuí Delta Plan comprises a law proposal, making it a code-like plan for the occupation of that extension of Porto Alegre. Nowadays, in the area intended for the “satellite city” there is the city of Eldorado do Sul, integrated to Porto Alegre’s greater urban area. The islands are occupied, but mostly towards their margins on alongside the access roads, therefore differently from the Delta Plan.

The delay on constructing the road because of lack of federal resources in the following years made the State Government organize a team, associated to Governor Leonel Brizola’s Office, to design a new project for industry and housing. Once again the administration turned to the Gravataí Wetlands in 1961, still unoccupied but with strategic multiple accesses, the airport and an already planned peripheral protective levee. The pilot plan was named *Porto Alegre Industrial City*,<sup>16</sup> and its team was composed by professors Paiva and Veronese once again and architect Marcos Hekman.

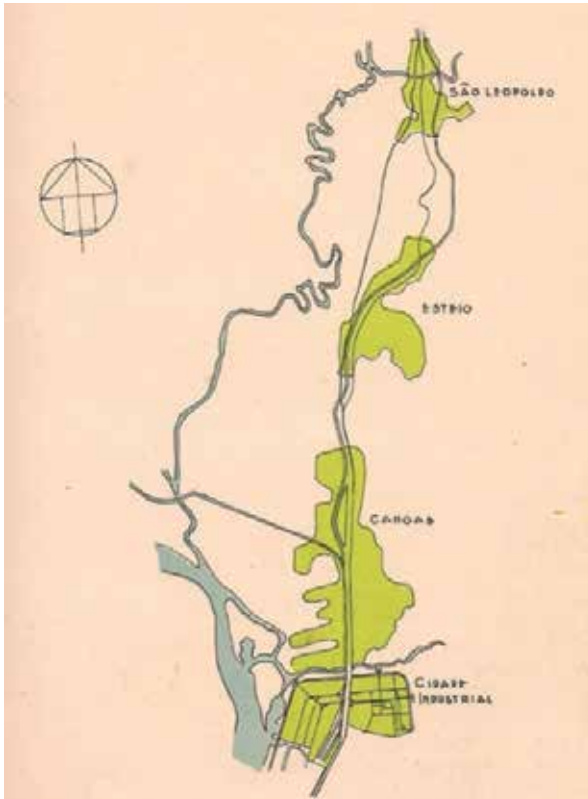


FIGURE 11 Industrial City location: north area of Metropolitan Region.



FIGURE 12 (Right) Industrial City Plan, 1961.

The delay on constructing the road because of lack of federal resources in the following years made the State Government organize a team, associated to Governor Leonel Brizola's Office, to design a new project for industry and housing. Once again the administration turned to the Gravataí Wetlands in 1961, still unoccupied but with strategic multiple accesses, the airport and an already planned peripheral protective levee. The pilot plan was named *Porto Alegre Industrial City*,<sup>16</sup> and its team was composed by professors Paiva and Veronese once again and architect Marcos Hekman.

The main references for this plan were the Brazilian industrial cities of Contagem (1941), Volta Redonda (1941) and the *Cidade dos Motores* (1945). The latter was meant to be the model of urbanism to be followed by the present project.

The project for the *Industrial City* enlarged the area of the precedent *Gravataí Wetlands Plan*, by occupying both sides of the road that sided the railway. This division created two large areas or polders, resulting from the protection of the levee, with individual centers.

The industrial string would locate at the inner contour of the levee, with a peripheral avenue and railways, similar to the precedent plans. The separation between this and the residential area was to be made through a wide green string, to also border the industrial string (Figure 12).

In this design, the levee borders the perimeter of the design area, protecting it from occasional floods. It also determines the structuring roads of the design, which organize the project's zoning. Just like the projects from the private initiative, the interaction to the lake and river delta is not privileged, because the flood protection was still an issue.

As for execution, negotiations were made with Petrobras (statal oil company) to build a refinery on site, and then proceeding with urbanization. The State Government failed on such negotiations, and matters of politic parties transition conflicted with the plan's continuity. Another delay on building the levee due to a new flood in 1967 added to the problem: the now desperately needed flood protection system was the focus of all cooperation between federal, state and local administration.

Therefore, the projects from the public initiative:

- Planned for city extensions similarly to the private initiative, aiming on organizing housing and industry;
- Counted on proposed laws to control occupation;
- Were discontinued for multiple reasons, including the urgency of federal works and other works made by Federal, State and Local administration alliances. The channel for the ocean was not executed because of its great cost, and for representing the potential decadence of the other state ports, Pelotas and Rio Grande, in the southern state.

The levee for protecting the wetlands from floods was part of a designed system of levees and pumping stations. The National Department of Public Works and Sanitation (DNOS) was responsible for this project, which also predicted a curtain wall with floodgates. The wall's height was established according to the flood of 1941, and obstructed the city's integration with its coast when built in the 1970s; it is a matter of discussions regarding the cityscape and its pertinence to the day.

## CONCLUSIONS

Flood management in Porto Alegre during the first half of the 20th Century was recurring news on the local newspapers. It affected part of the city center and mostly the neighborhoods close to the Guaiba River, which accommodated most of the flourishing industrial activities and the working class population, demanding of infrastructure and housing. The first project for the area sought solutions for the floods and sanitation issues through landfills and channels towards the lake. The following project, *Benopolis*, was hired with major modifications in relation to its predecessor, because of expropriations for the levee and the railway station. These elements restricted the project area, and the designed blocks and roads were to accompany their geometry.

The *Jacui Delta* Plan involved the delta islands and the city of Guaiba, and planned for industry and housing to occupy the limits established by a precedent geologic study. The area was to be occupied nearby a planned leveed road, starting from the continent because of expensive landfill work on the islands. The delay on constructing the road compromised the plan's execution, and the State Government turned to the *Gravatá Wetlands* area to create the *Industrial City Plan*. This last plan failed to be executed as well, for it depended on the flood prevention system to be built and the public administration to have continued.

This investigation shows that sanitation and flood protection, as seen, were important premises for the projects, influencing on the urban fabric and general conceptions, thus confirming that there have been real initiatives towards solving the problem. This research verified that the delay on building the federal highway and the outer levees completely shifted the focus from the proposals or stopped them from being executed, while only the Flood of 1941 would be significant enough to trigger governmental action towards protecting the city. Despite the sequence of obstacles, the resilience of the industry and workers ideal was historically part of an important economic moment, and later caused for allotments to take place in areas further away from the city center, and for the Porto Alegre Metropolitan Region to develop.

## Endnotes

- 1 Local newspapers reported the scourge of the population in the floods of 1928, 1936, 1941 and 1967. We highlight the flood of 41 in the publications: “Fábricas Renner: Enchente 1941” (São Leopoldo: Rotermund & Co.1941) e Rafael Guimaraens, “A enchente de 41” (Porto Alegre: Libretos,2013).
- 2 At the time of the Otavio Rocha Government, several infrastructure works are made, such as sewage and drainage systems, enabled by external loans. Günter Weimer, “A Capital do Positivismo”, in *Estudo Urbanos: Porto Alegre e seu planejamento*, ed. Wrana Panizzi et.al. (Porto Alegre: Editora da Universidade, 1993), 119.
- 3 Records from the Mentz S.A Company between 1936 and 1938.
- 4 Luiz Arthur Ubatuba de Faria, *Projecto de um plano de urbanização para um bairro industrial e operário na Várzea do Gravataí* (manuscript, Porto Alegre, 1935)
- 5 Luiz Arthur Ubatuba de Faria, “Urbanização da Várzea do Gravataí” *Boletim da Sociedade de Engenharia do Rio Grande do Sul*, 15, (1936): 51.
- 6 In 1936, Ubatuba de Faria and his colleague and engineer Edvaldo Pereira Paiva would promote their studies for the city at the Urbanism Expo – surely supported by the Local Administration – and also in 1937, at the Statistics and Education Expo from the Ministry of Education in Rio de Janeiro. See: “A visitadíssima Exposição de Urbanismo”, *Diário de Notícias*, December 1st,1936,3, and “O êxito da exposição de urbanismo de Porto Alegre no Rio de Janeiro”, *Correio do Povo*, February 2nd, 1937,3.
- 7 Luiz Arthur Ubatuba de Faria and Edvaldo Pereira Paiva, *Contribuição ao Estudo da urbanização de Porto Alegre* (manuscript, Porto Alegre,1938).
- 8 The sanitary engineer Francisco Saturnino de Brito made several sanitation and extension projects to Brazilian cities such as Campos, RJ (1901); Santos, SP (1905-1909); Rio Grande, RS (1909); Recife, PE (1909-1918) and Curitiba, PR (1920), influencing many of the planners engineers such as Ubatuba Faria. With profound influences of positivist thought in his time, he had dealt with urban issue in its many aspects. About Saturnino de Brito Engineer see: Carlos Roberto Monteiro de Andrade, “A peste e o plano: o urbanismo sanitaria do Engenheiro Francisco Saturnino de Brito” (PhD diss., São Paulo, 1992).
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Figure 01: Faria, Urbanização da Várzea, 61-62.

Figure 02: Faria and Paiva, Contribuição ao estudo da urbanização de Porto Alegre, 1938,119.

Figure 03: Faria and Paiva, Contribuição ao estudo,119 (enlargement);

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Figure 06: Paiva, Delta do Jacuí, 9.

Figure 07: Paiva, Delta do Jacuí, 31.

Figure 08: Paiva, Delta do Jacuí, 22.

Figure 09: Paiva, Delta do Jacuí, 49.

Figure 10: Paiva, Delta do Jacuí, 50.

Figure 11: Paiva, Cidade Industrial,19 .

Figure 12: Paiva, Cidade Industrial, 68.

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# SMART CITY'S ANTI FLOOD SYSTEM: FEASIBILITY AND COSTS OF INTEGRATED GOVERNANCE

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This article's main question is to consider the planning of Smart City with effective anti-flood system. For this purpose, it will be addressed the historical development of "Smarts Cities" with anti-flood systems, indicating its feasibility and costs of implementation. It will also be analyzed the technology used in anti-flood system (the G-can), evaluating its implementation costs, economic damage and possible secondary use. Finally, it will be indicated how the integrated governance can be applied to these cities in order to give greater effectiveness and efficiency to the systems.

## **Keywords**

Smart City; New technologies; Flood; Flooding; Governance





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# Seeking Urban Resilience through Affordable Housing

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Chair: Lawrence Vale



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# REDEVELOPING SHENZHEN'S URBAN VILLAGES: CAN AFFORDABLE HOUSING BE PRESERVED IN VULNERABLE LOCALES?

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Lawrence Vale | Linda Shi | Zachary Lamb | Qiu Xi | Hongru Cai

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The dramatic economic growth in Shenzhen, China since 1980 and its recent unprecedented increases in housing prices threatens the city's affordable housing, especially for migrant workers who constitute the vast majority of residents. Without permanent residential status (*hukou*), these workers lack access to the formal housing market and publicly subsidized housing. For decades, they have found affordable rental housing in Shenzhen's urban villages--the bubbles of collectivized land that have been engulfed by Shenzhen's expansion. Village associations have gradually transformed these villages into ever denser housing settlements, but a soaring real estate market makes it difficult to pass up the opportunity to sell village land to developers for wholesale site clearance and redevelopment. At the same time, Shenzhen is one of ten most financially exposed cities worldwide to flooding, according to a 2013 World Bank report. Such exposure often translates into the greatest vulnerability for cities' poorest residents.

In this context, our paper examines the tensions and opportunities of China's unique urban village condition in preserving affordable housing and increasing urban resilience. We ask whether and how urban villages enhance urban resilience, broadly conceptualized as efforts that enhance access to economic livelihoods, environmental protection, personal security, and empowered governance. Our research draws on fieldwork in Shenzhen, interviews with municipal staff and officials, researchers, urban village leaders and residents, and a review of English and Chinese literature on urban villages and climate adaptation in China. We also overlay maps of flooding hotspots and of urban village locations. We find that policy frameworks and officials in Shenzhen place little emphasis on retaining centrally located urban villages for their affordable housing value. Instead, the national government calls for the eradication of urban villages in China by 2020. Shenzhen officials instead emphasize "affordable housing" for educated knowledge workers needed for an innovation economy. Meanwhile, local planners largely ignore the increased risks that sea level rise, storm surge, or more frequent and severe typhoons pose for either central or peripheral communities, and lack plans to study or change future engineering and design. Urban villages are not necessarily disproportionately exposed to flood risks, but when they do flood, it is used as an argument for wholesale site redevelopment. Redevelopment changes the tenure status, which opens access to public infrastructure funding, and site clearance allows for massive reengineering works. Although redevelopment projects often retain some rental units, rental prices increase significantly, thereby displacing the poorest migrant workers to more peripheral villages.

The case of urban villages in Shenzhen demonstrates the complex challenge of improving the holistic resilience of low-income urban residents in Chinese cities. By integrating issues of housing affordability and climate change-related hazard vulnerability, we question who gains from attempts to enhance resilience when the low-income migrant poor without higher education fundamentally lack a right to the city. In the absence of broader housing and land policy reforms, emphasizing the value of urban villages for housing young educated migrants may represent the most likely way to retain some parts of urban villages in the short term.

## **Keywords**

Affordable housing, Flooding, Urban resilience



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# POST-APARTHEID HOUSING IN CAPE TOWN: LEARNING FROM THE REDEVELOPMENT OF JOE SLOVO

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The consolidation of the Apartheid regime as a way to control and dissuade urbanization was based on dictatorial urban planning and enforcement mechanisms to impose where and how people should live and work. In and around Cape Town, for example, Black African and Coloured townships were created in environmentally fragile areas, often below sea level, and disconnected from the economic vitality of the central city. The Reconstruction Development Program housing policy (1996) promoted the expansion of the urban footprint and reproduced the Apartheid planning rationale of low density, satellite cities, and disconnection between jobs and residential areas. Empirical analysis demonstrates that the urban form—a product of spatial arrangements of the old regime—did not change. For example, the city has not densified as the population density models predict would occur in a city that is overcoming the large welfare losses of apartheid. The results indicate that while enormous expenditures have been made, the urban form of the city has not changed in ways that improve the living conditions and spatial integration of the poorer Black African population; they remain excluded from the city's social contract. The phased redevelopment of the Joe Slovo informal settlement in Cape Town exemplifies the evolution of post-apartheid housing policy, showing how—after significant false starts—it is possible to overcome both the legacy of hyper-dense dangerous places and the alternative policy of segregating the non-white poor population into distantly located, low density, underserved and environmentally fragile areas. The paper begins with an overview of the national and local policy to understand how the experience fits into a broader context and –at the same time- contests the mainstream narrative. It also investigates the preconditions that enabled Joe Slovo to become a catalyst of change and innovation for so many stakeholders (state, NGOs, community members, developers). Second, the paper studies the structure and dynamics of the relationships among different actors and how these affected the evolution of the process, while permitting local residents to gain enhanced capacities for its own governance. Third, it explores the ways that the community has gained increasing resilience regarding different types of risk and threats, such as displacements, fires, and violence. Furthermore, it evaluates the different characteristics of the built environment in Phases I, II and III, and their approach to ecological risks and stresses. Last, the study compares the three interventions' development outcomes, regarding the community's social structure and economic livelihoods.

**Keywords**

Affordable housing, Flooding, Urban resilience



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# GLOBAL LEARNING FROM THE 1953 DUTCH FLOODS TO JAKARTA'S KAMPUNGS AND POST-SANDY NEW YORK

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Cities around the world are proposing ambitious plans to adapt to the impacts of climate change. They promote ecological security and the perpetuation of economic growth, while often raising questions about justice and equity. Scholarship on urban climate change adaptation planning has tended to reinforce static conceptualizations of the city as a bounded territory, at the present moment. It has neglected interconnections across space and time--the networks and processes of globalization, urbanization, and geopolitics, and historically specific institutional relationships and political trajectories. This paper explores global/urban networks in urban adaptation, probing the frameworks through which concepts travel, transform, and embed. Beginning with the phenomenon of globalizing Dutch water management expertise, I trace the historical and spatial connections between the 1953 North Sea Flood in the Netherlands to adaptation planning initiatives in Jakarta and New York. I focus on the roles of emerging global networks, institutional partnerships, and the politics of designing urban spatial plans. This research lays the groundwork for a theory of global learning in the context of climate change and globalized urban development, and develops a method of urban relational analysis to study disparate, yet highly interconnected sites. I find that global, national, and urban scales are increasingly intertwined, with new institutions and frameworks forming multiscale, multilevel networks through which ideas, influence, and capital flow. These networks are conferred further reach by colonial and postcolonial histories, the inherited conventions of global development, and, now, the imperatives of climate change. Alongside, I find that urban adaptation projects, while globally constituted, are reformatted by and to local sociospatial systems. They precipitate direct and indirect resistance, and the production of alternative visions -- "counterplans." These findings emphasize the agency of marginalized urban communities and the embeddedness of climate change responses within scales, levels, and histories of global urban development. They imply that planners committed to just socio-environmental outcomes engage across the range of urban scales and networks, and learn from critical social and political imaginaries and practices.

**Keywords**

Affordable housing, Flooding, Urban resilience





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# HOUSEHOLD RESILIENCE FROM NEW ORLEANS TO DHAKA: LEARNING FROM LEVEES

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Dhaka and New Orleans are each situated in the heart of great continental river deltas (the Ganges-Brahmaputra and Mississippi, respectively), in that critical dynamic landscape where a large river meets the sea. Like other delta cities, both Dhaka and New Orleans owe their existence and their privileged position within their regional and national economies to the strategic opportunities afforded by their delta landscapes. Also like other similarly situated cities, both Dhaka and New Orleans have been dramatically shaped by the ever-present hazard of their watery landscapes. Heavy rains, river flooding, and tropical storms have periodically devastated the populations and built infrastructure of both Dhaka and New Orleans. Throughout the histories of these two cities, the tension between the economic opportunity and biophysical instability of their settings has driven residents and state authorities to mobilize infrastructural interventions to divide land from water to protect property and population. This paper will explore the history of one particular form of infrastructural intervention that has been critical in shaping the relationship of these cities to their landscapes: levees or embankments. Both the Ganges-Brahmaputra Delta and the Mississippi Delta abound with forms of construction and community that developed to accommodate the periodic flooding characteristic of the landscapes. Nonetheless, the 19th and 20th century urbanization patterns in Dhaka and New Orleans relied heavily on levees to define urban from non-urban, dry from wet, inside from outside. Even as critics and scholars have raised serious concerns about the efficacy and unintended ecological and social consequences of such infrastructure, allied local and national interests in both cities continue to expand levee protections to accommodate further urbanization in the face of climate change-related increases in flood vulnerability. This paper will combine analysis of historical records and field interview data from Dhaka and New Orleans to consider the ways in which decisions regarding levee design and construction reflect the evolving roles of states in mediating between environmental hazards and urban people and places.

**Keywords**

Affordable housing, Flooding, Urban resilience



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# KUY-E NARMAK: A RESILIENT HERITAGE OF MODERN HOUSING IN TEHRAN, IRAN

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TU Delft

As part of the Iranian national development programme during the 1950s, the local architects collaborated with the government to develop the first affordable housing project in Iran, known as Narmak. For constructing this neighbourhood, the architects were inspired by the ideas discussed in the CIAM IV, and they integrated them with the local architecture. Although the project was aimed at accommodating 7,500 families, about 90,000 families live there, at present. Considering this increase in the population density, surprisingly, the urban structure of Narmak has remained unchanged, and there is still a strong sense of belonging among the residents. Therefore, this paper unfolds how the architects of Narmak addressed the local culture and society, and through which processes this resilient urban form was created.

#### **Keywords**

affordable housing, resilient urban form, vernacular modernism, population density,

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## INTRODUCTION

Similar to many Middle-Eastern countries after the Second World War, Iran underwent a process of modernisation which was different from that of its neighbouring countries. For creating a modern nation that made Iran part of the civilized world, the government diffused the notion of modern living through mass housing construction, largely carried out by European-trained Iranian architects.<sup>1</sup> Creating cross-cultural exchanges, they played the mediator role between the International Style and the Iranian culture. Contrary to the colonised countries in the middle-east, such as Iraq, Saudi Arabia, Emirates and so forth that were mostly laboratories for western architects, the Iranian architects had the possibilities to develop their own practices that led to the construction of 400-housing units, between 1946 and 1948 in Tehran. Through the design and realisation of mass housing projects, they helped the Iranian government to pursue the objectives of the development plans.

Along with globalisation, the Iranian Plan Organisation prepared a series of development plans, in which public housing for the middle- and low-income families held a prominent place. Each planning was a reflection of national and international socio-political and economic conditions of the time, and a result of rural-urban migration and the demographic change in Iran.<sup>2</sup> To respond to the rapid urbanisation and growth of population density in the cities, 'The First Development Plan' (1948-1955) addressed the need for constructing affordable housing, through allocating land beyond the borders of the main cities<sup>3</sup> and providing mortgage with a low-rate interest.<sup>4</sup>

To achieve these objectives, the government established a new financial organisation named *Bank-e Sakhtemani*<sup>5</sup>, in 1952. This organisation collaborated with the Association of Iranian Architect Diploma (AIAD)<sup>6</sup>, to prepare master plans for new housing projects. Accordingly, a series of housing projects was realised such as Kuy-e Narmak (1952-58), Kuy-e Nazi-Abad (1952-54), and Tehran Pars (1958-72), among which Kuy-e Narmak played a distinctive role. On the one hand, Narmak was the first attempt of the AIAD for designing a large-scale housing project.<sup>7</sup> For them, this was an opportunity to employ modernist ideas discussed in post-war conferences such as the UIA and CIAM,<sup>8</sup> and integrate those ideas with the local architecture.<sup>9</sup> In doing so, they intended to install and practise a vernacular modernism. According to historians Bernd Huppau and Maiken Umbach, the concept of vernacular modernism emphasises 'place particularism' for preserving identity in the globalisation process.<sup>10</sup> On the other hand, this project aimed at accommodating 25,000 people; yet, it houses approximately 340,000 residents at present. Considering changing urban policies and economic conditions, individual low-rise houses have been transformed into mid-rise apartments, and ironically, the urban form and the public spaces have remained unchanged. Furthermore, despite these changes, there is still a strong collective identity and sense of belonging among the residents of Narmak.<sup>11</sup> These characteristics may define Narmak as a resilient urban form that has the ability to cope with changes, and simultaneously preserve an identity of place.

In recent years, the concept of resilience has become a source of inspiration for urban development. This concept was firstly introduced by Crawford Holling, to investigate the interacting populations and their functional responses in ecological studies.<sup>12</sup> He describes resilience as "the system to absorb the disturbances between efficiency and persistence, constantly and change, predictability and unpredictability, in order to keep equilibrium continuously".<sup>13</sup> Describing the models of change, this conceptual framework gradually influenced the other fields such as engineering, business studies, psychology, social science and urban planning. For instance, to discuss the resilience of society to climate change, Peter Timmerman established a link between this concept and vulnerability, where he defined resilience as the capacity of a system to absorb a hazardous event after happening.<sup>14</sup> Another example can be found in material science, where this idea refers to the elasticity of materials to resume the original shape after being stressed by internal and external forces.<sup>15</sup> However, this idea opened new discussions about urban development during the 1990s and 2000s, when neoliberalism became a form of governance.<sup>16</sup> In this model, state intervention and public spending have been reduced, while market-centred forces have become main features. Accordingly, this new economic system has influenced urban land-use and development, especially in metropolitan regions, so urban planning has become an entry point for resilient thinking.<sup>17</sup>

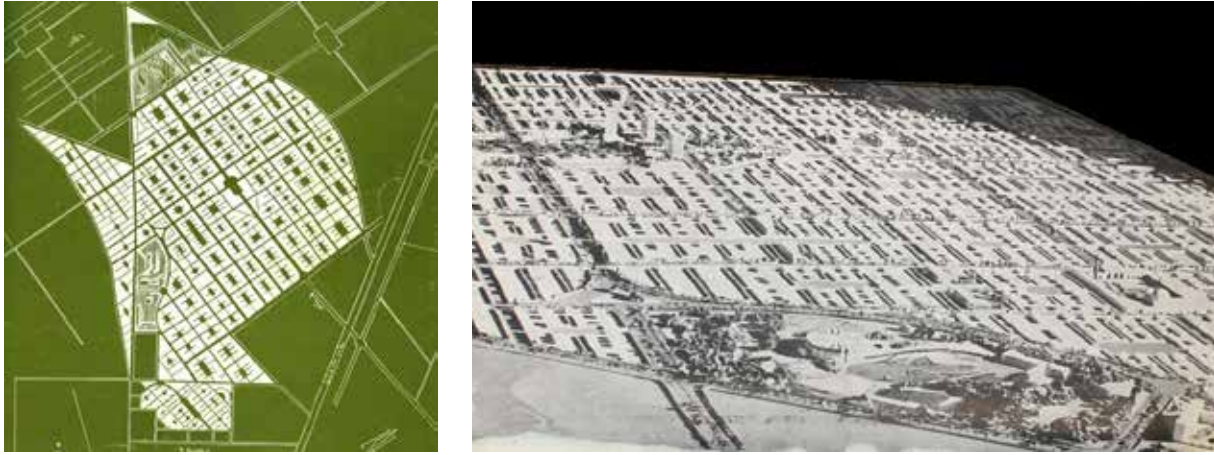


FIGURE 1 The urban layout of Narmak. The left image shows the master plan of Narmak, designed by AIAD. The right image shows a physical model made by Bank-e Sakhtemani, showing the urban squares, the park, and the boulevards.

Despite the fact that in recent studies the importance of resilience thinking in urban planning has been addressed as a tool for sustainable urban development, the ways through which relationships between affordable housing practices and the resilience concept can be achieved have been rarely studied. Therefore, by analysing Narmak's urban form and development, this paper reveals how the land-ownership system and the practices regarding 'place particularism' contributes to create a resilient urban form and a sense of belonging. Subsequently, understanding this model demonstrates whether the modernisation process through mass housing practices in a non-western country such as Iran presents a sense of continuity in the structure, meaning, character and identity of place, or generates a sense of disjuncture.

## KUY-E NARMAK<sup>18</sup>

The Iranian oil nationalisation process brought about International sanctions on the Iranian economy, mainly imposed by the British government. The Iranian government was not able to sell the crude oil, so to ease the impact of the sanction on its economy, between 1951 and 1953, the Mosaddeq<sup>19</sup> administration declared the economy without oil. To achieve this objective, they focused particularly on the agricultural activities and productions, and authorised the Ministry of Agriculture for development projects.<sup>20</sup> For constructing affordable housing, this ministry in collaboration with the Iran Insurance Company established Bank-e Sakhtemani. This bank, due to the land-price and land-speculation in the urban areas, asked the government to permit the construction of new houses outside the cities. In 1952, the parliament approved a new law, named the registration of dead-lands, through which Bank-e Skahtemani was allowed to own un-built lands, 3 kilometre far from the borders of the exiting cities defined by the municipalities.<sup>21</sup> Subsequently, a series of housing projects was proposed around Tehran, among which Kuy-e Narmak was the first one that would be constructed.

This project is designed by the AIAD and realised by Bank-e Sakhtemani, between 1952 and 1958. Situated in the North-Eastern part of and 3.5 kilometres from the old city of Tehran, Narmak was constructed on an area of 506 hectares,<sup>22</sup> in which approximately 184, 225, and 97 hectares were allocated to the squares and streets, dwelling lots, and public amenities, respectively.<sup>23</sup> The urban layout of Narmak proposed a grid including 6 main boulevards and a series of intersected lanes. This grid formed 110 blocks where in the middle of each, a public square was allocated. In the block layout, up to six dead-end alleys (east-west) were driven from each square, to divide the land into the smaller fragments forming the housing parcels. These parcels were also divided into 200 to 500 m<sup>2</sup> lots, where totally, 7,500 single-family detached houses could be constructed [Fig.01].

This urban structure was the first attempt of the AIAD to employ modernist ideas for designing a large-scale housing project in Iran.<sup>24</sup> Although low-cost housing design and development were not attractive for many highly-educated Iranian architects and private developers, for AIAD, this was an opportunity to implement their modern ideas. Before this time, some board members of the AIAD, such as Ali Sadegh<sup>25</sup>, were actively involved in CIAM discourses, and they spread their ideas among general public through a series of publications named 'Architect'.<sup>26</sup> When Bank-e Sakhtemani asked the AIAD to prepare a master plan for Narmak, they attempted to design "a modern city just outside the borders of Tehran, following the latest planning principles and modern regulations of urbanism"<sup>27</sup>, focusing on town planning. This focus might be a result of the CIAM discourses regarding the theme of 'The Functional City'. According to Kenneth Frampton, "the second stage of CIAM, lasting from 1933 to 1947, was dominated by the personality of Le Corbusier, who consciously shifted the emphasis to town planning"<sup>28</sup>. Indeed, the CIAM IV in 1933 was the most comprehensive congress from an urbanistic standpoint, resulted in the articles of the Athens Charter published in 1943.<sup>29</sup> This charter explained the conditions of towns and their rectification in four main categories as follows: Dwellings, Recreation, Working, and Transportation. Contrary to the garden city patterns which satisfied the individual, this charter emphasised the advantages of collective organisation, especially for constructing residential areas.<sup>30</sup> Furthermore, generalising principles of town planning in four distinct categories formed a condition for universal applicability of a very conception of CIAM, which was rigid functional zoning of city plans with green belts in-between, and a single type of urban housing, particularly high widely-spaced apartment blocks, wherever possible.<sup>31</sup>

To implement these ideas internationally, for instance, Le Corbusier designed the master plan of Chandigarh, in India, in 1952, and this project became a source of inspiration for many architects in countries in the region. Before designing the master plan of Narmak, the board members of the AIAD visited India in 1952.<sup>32</sup> They aimed to study modern housing experiences similar to the scale and context of Narmak. After the realisation of Narmak, some Western figures visited the project such as Edward Welz, Marcel deBuer, and Jop Benou, and surprisingly, most of them paid compliments to Narmak.<sup>33</sup>

For instance, Jop Benou who in 1955 visited and compared Chandigarh, Narmak, and a worker-housing project in Karachi, described the design of Narmak as a considerable attempt to meet the new needs of urban life, and which has relevance to the Iranian life-style.<sup>34</sup> Considering these compliments, the question is how the architects of Narmak integrated the ideas discussed about 'The Functional City' with the local architecture.

## A VERNACULAR MODERNISM

As mentioned earlier, a grid of streets made a rigid functional zoning possible in the urban layout of Narmak. In the intersection between the central north-south and west-east Boulevards, the architects placed a big plaza around which the main public buildings were located, such as three administrative towers, a municipal building, a hospital, and commercial buildings [Fig.02]. In addition, along the other main boulevards, a series of small public facilities was situated, such as shops, schools, restaurants, and tea-houses. As an exceptional form and a leisure zone in this rigid urban layout, a large park was designed on the west side of Narmak, where iconic buildings were placed such as the Museum of Modern Art, a cinema, and a sport hall [Fig.02].

Furthermore, a French prefabricated system named KALAD<sup>35</sup> was proposed, to construct similar houses, approximately 70 units in each urban block [Fig.03]. This system was not only a technique for housing standardisation, but also a "representative of the beautiful and affordable modern house"<sup>36</sup>. However, only 370 units were constructed with this system, and the architects chose to deal with the local materials.

Seemingly, the architects of Narmak tried to integrate the modernist ideas with the local architecture, through an eclectic process. According to Randy David, this process designates the conscious and selective adaptation of

vernacular and indigenous elements from the local culture in order to lend a touch of familiarity to something which is brought in from outside.<sup>37</sup> In this regard, the architects of Narmak, firstly, integrated the archetypal elements of the Persian garden with the grid of streets, to resemble the *Chaharbagh*<sup>38</sup> of Isfahan.<sup>39</sup> As an urban planning tool for the extension of the old city beyond its walls, the first large-scale application of Chaharbagh took place in the 17<sup>th</sup> century Safavid Isfahan.<sup>40</sup> In this plan, Chaharbagh was transformed to a linear garden where garden palaces, rows of trees, and water channels flanked an urban garden forming an avenue [Fig.04].<sup>41</sup> This was a new interpretation of the Persian garden where Chaharbagh acted as the main street that connected the old and new neighbourhoods.

Secondly, the architects of Narmak placed a small square (*Meydan*)<sup>42</sup> in the middle of each urban block, embedding a garden. This formed a place where children can safely play outside, and people can gather and meet [Fig.04].<sup>43</sup> According to Mohamad Beheshti,<sup>44</sup> a representative characteristic of the Persian garden is the life inside the garden, because the garden creates a place for joy, happiness, and encounter.<sup>45</sup> Accordingly, it seems that integrating gardens with the urban structure and the every-day life of people was an attempt to address the local culture and society.

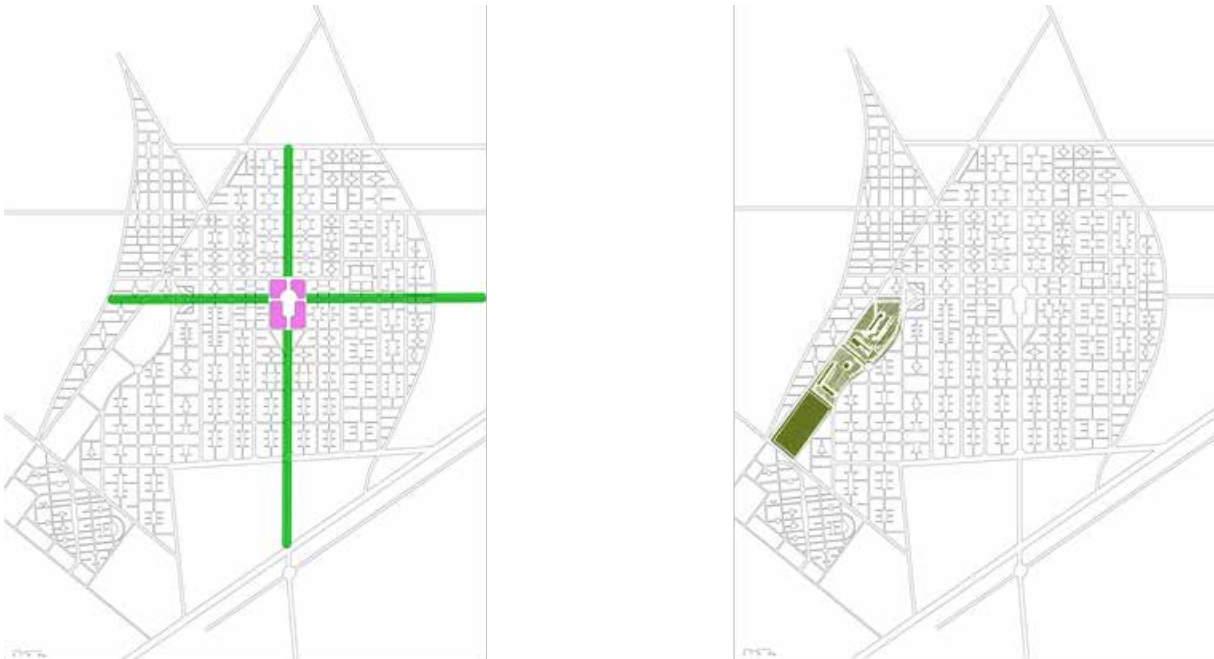


FIGURE 2 the Main Square and park in Narmak . The left image shows the main urban square highlighted with red colour, where two green axes indicating the main boulevards intersect one another. The right image shows the park in Narmak, indicated with green colour.



FIGURE 3 KALAD system. The left image shows the panels used for prefabrication in Narmak. The right image shows some houses constructed with this system in Narmak.

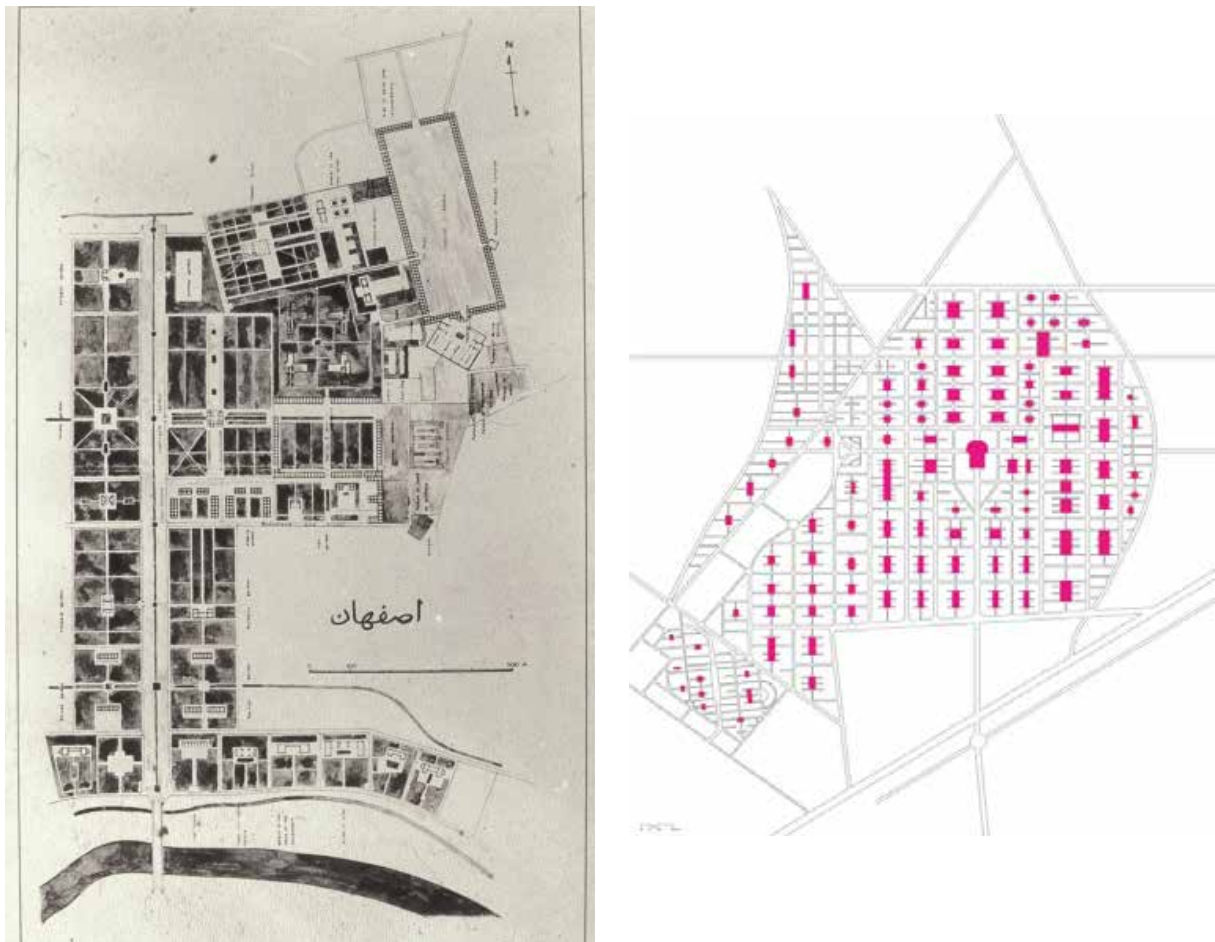


FIGURE 4 Chaharbagh & Gardens. The left image shows the 17th century urban extension of Isfahan, where a linear garden formed the urbanised Chaharbagh to connect the old and new neighbourhoods. The right image shows the collective squares embedding gardens in Narmak.

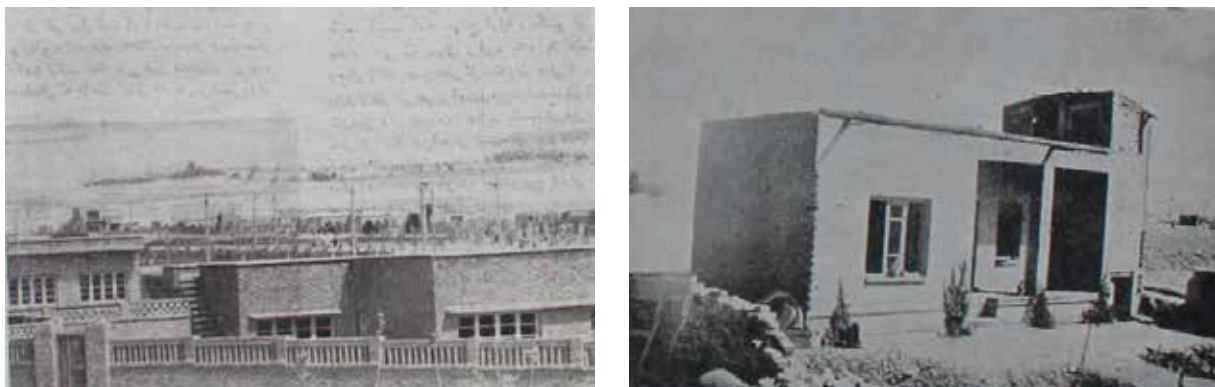


FIGURE 5 the individual houses in Narmak. The left image shows the sample houses constructed by Bank-e Sakhtemani. The right image shows a typical house constructed by people in Narmak.



Finally, for designing individual houses with KALAD system, the architects used one-story detached houses in three typologies of two, three, and four bedrooms. These houses were positioned freely on the lots, and each lot was surrounded by walls, with about 2-meter height, to form a *hayat*.<sup>46</sup> However, due to the high cost of construction and inaccessibility to the sufficient materials and techniques for the mass production, only few houses with this system were constructed.

To speed up the process of construction, the architects realised a few samples of these house types with a mix of load-bearing brick walls and steel skeleton. This helped architects to show people how new housing types could be built by local materials, and to propose two choices for the housing construction.<sup>47</sup> Accordingly, people could either order a desired type to Bank-e Sakhtemani, or build their houses with the technical supervision of the Bank.<sup>48</sup> Although some chose the first option, the majority of people selected to build their own houses, which gave birth to what Umbach and Huppauf called “the heterogeneity and the polarity of modern experiences, as well as concrete praxis in [a] particular place”<sup>49</sup> [Fig.05].

For constructing their houses, the people asked local/traditional builders, known as Mi'mar. Traditionally, Mi'mars used the principles of courtyard houses and modified them to different plot shape and size for constructing individual houses. This was a gradual process; however, in Narmak, for the first time, they faced with the task of mass construction, in a short time. To deal with this issue, firstly, Mi'mars formed informal agencies together with the immigrants who came to Tehran to work in construction-related fields.<sup>50</sup> After visiting the sample models, they offered owners one or two-story houses with a small front and back yard, within the walled plot. Although the original design of houses proposed labels to rooms for specific functions such as living room and sleeping room, the Mi'mars neutralised the specific function of each room by constructing semi-equal rooms that embodied the traditional multi-functional use of spaces. On the contrary, they used the white unadorned facades, rectangular outlines, wide openings, and flat roofs as it was proposed by the original design.

This process of localisation and adaptation, based on local materials and market forces, integrating traditional crafts and migrant labour capacities, seemed uninteresting to Western architects. When a French architect, Rossanne, visited Narmak in 1956, he claimed that “unfortunately this new town was not completely constructed based on the proposed master plan, and the construction permission was granted to people without controlling”<sup>51</sup>. He argued that this can destroy the beauty of the project, and lead to a terrible disaster in the future.<sup>52</sup> However, looking at the current situation, surprisingly, this so-called disaster accommodates the daily needs of its users, creating a strong local identity and sense of belonging. In this regard, the questions which can be raised are: how people were able to build and change their houses in Narmak, and how the architects predicted and dealt with possible changes in their master plan. The answers might be found in the financial model for funding, the new laws considering land-use and ownership, and the role of Bank-e Sakhtemani in the construction process.

## A RESILIENT URBAN FORM

Before the approval of the dead-land registration law, the person who resuscitates dead-land becomes the owner of the land. However, the new law enabled the government to regulate issues related to the land use, urban planning, and determination/adjustment of the land price, safeguarding more accurate and broader utilization of the land for the provision of housing. Hence, through the prepayment of land purchases, Bank-e Sakhtemani provided mortgage for the construction of new houses. This financial model, supported with the new law considering the land-use and development, made the project independent from the external investments, so Bank-e Sakhtemani was able to self-organise the project.

This capacity was also brought forward by the people who bought a plot in Narmak. These land-owners needed a financial support to realise their houses. To do so, many of them divided their land into two or three pieces, kept one lot, and sold the rest. Legally, this was possible as a result of the private ownership law, established in 1906 during Iranian Constitutional Revolution to counter the 19<sup>th</sup> century landlord.<sup>53</sup> Although a direct result of this law was the provision of financial resources for the construction, more importantly, it provided a capacity through which people could organise, control, adapt and change their living environment by themselves, reinforcing the self-organisation concept in this project [Fig.06].

Consequently, this concept, which according to Francis Heylighen is a process of internal organisation within a system without being guidance or management by an outside source, established a ground for evolutionary change, indicating resilience thinking in the planning process.<sup>54</sup> In addition, this characteristic helped the inhabitants of Narmak to preserve their identity, creating a sense of belonging to the place.

This feeling was largely affected through constructing new houses and neighbourhoods, since the start of the second industrial revolution in the early 1900s.<sup>55</sup> Before this period, in Iran, the residential neighbourhoods were constructed as autonomous zones based on ethnic or religious segregation, where juridical regulations defined their pattern;<sup>56</sup> and people were responsible for providing access to houses, preserving them and overseeing their safety.<sup>57</sup> On the contrary, Narmak, included a mixture of employees, such as the government officials and teachers, small landowners, and non-bazaar merchants with various religious and ethnic background, representing a neutralised middle-class neighbourhood.<sup>58</sup> However, Bank-e Sakhtemani let people be responsible for constructing their houses, and the bank itself focused on the realisation of public spaces such as the Chaharbaghs, Meydans, and streets.<sup>59</sup> Consequently, People constructed houses based on their own needs, and they shaped and materialised outdoor spaces such as sidewalks in front of their houses in negotiation with neighbours, forming a new social participation in the neighbourhood.

The land-ownership system in Narmak, caused a particular social identity of the owner of such property, which according to Robbie Goh depends on the construction of the image of private property.<sup>60</sup> This created a sense of liberty for the inhabitants permitted by the general justifications of property rights, and a willing for participation in the state initiated development programme.<sup>61</sup> In addition, in Narmak, the land-ownership system provided a capacity for transformability/adaptability, which is the opportunity for self-organisation, although the urban structure remained intact and absorbed changes.<sup>62</sup> In short, it might be argued that these characteristics represent Narmak as a resilient urban form, where the top-down development benefited from a bottom-up participatory process in the construction and development through time, facilitating a concrete praxis that led to a vernacular modernism.



FIGURE 6 The evaluation of Narmak. Considering the central square as the point of departure for the comparison, the left-up image shows Narmak in 1956. The right-up image shows Narmak in 1965. The left-bottom image shows Narmak in 1979. And the right-bottom image shows Narmak in 1988. The situation of Narmak in 2016 is also illustrated in the last two images. In addition, in the right column, a series of analytical drawings indicates the evaluation of the red-spot from the original design to the current situation.

## CONCLUSION

Comparing Narmak with the other neighbourhoods constructed for middle- and low-income families between 1940 and 1960 in Tehran, there is a strong collective identity and sense of belonging among its residents. Seemingly, the characteristics of Narmak, as a resilient urban form, have a substantial impact on creating this feeling. These features, according to Erydin and Tasan-Kok, are “(1) the ability of a system to absorb or buffer disturbances and still maintain its core attributes, (2) the ability of the system to self-organise, and (3) the capacity for learning and adaptation in the context of change”<sup>63</sup>. During the past 50 years, this urban form, as a system, was able to absorb and cope with changes, despite the instable political and economic conditions in Iran, the rapid growth of population density in Tehran, the considerable increase in the building density, and the radical transformation of Narmak’s skyline. This ability was mainly possible through the financial model, introduced by the bank, and the land-ownership system, regulated by the parliament, which enables Narmak to undergo a self-organisation process.

On one hand, this process refers to the bottom-up development of Narmak where the role and participation of inhabitants were essential for constructing a new neighbourhood. On the other hand, although the master plan of Narmak was a result of top-down development where through an eclectic process, the architects integrated the archetypal elements such as Chaharbagh and Meydan with their proposed scheme, these elements constituted a frame within which change could take place, and occur in a harmonious way. Without strictly determining factors, the residents realised their houses based on the habits and with the local materials, and transformed them based on their new needs. Indeed, this characteristic refers to what Pierre Bourdieu called ‘habitus’<sup>64</sup>. Furthermore, in the development process, the traditional role of inhabitants in neighbourhood, as non-elite populations, changed to an active agent of social and economic change, and the residents were able to respond to urban population growth and housing need through transforming individual houses to residential apartments, and adapting their living spaces to the new circumstances. In short, it might be argued that analysing the Narmak’s urban form and development demonstrates how the concept of modernity and the vernacular, as well as continuity and change tie together creating an alternative model of modernism that becomes a resilient heritage of modern housing in Tehran.

## Endnotes

- 1 Ervand Abrahamian, *A History of Modern Iran* (Cambridge: Cambridge University Press, 2008).
- 2 Ali Madanipour, *Tehran: The Making of a Metropolis*, World Cities Series (Chichester: John Wiley & Sons, 1998).
- 3 The main city, here, means the capital city of each province, in Iran.
- 4 Mohamad Ali Abdi, Sima Mehdizadegan, and Farzaneh Kordi, *Six Decades Housing Planning in Iran (1948-2008)* (Tehran: BHRC Publication, 2011).
- 5 In English, Bank-e Sakhtemani means the construction bank.
- 6 In Persian: Anjoman-e Architect-haye Diplom-e Iran. In 1946, a group of young Iranian architects formed this association to discuss and practise adjusting modernist idea to local architecture, and to make a distinction between traditional craftsman named Mi’mar and graduating students of universities. In this association, the senior members studied abroad under Reza Shah’s command, dispatched to Europe in 1928. However, junior members were the first generation of graduates from the Faculty of Fine Art (Honar-haye Ziba) at Tehran university in 1940. Please see: Iraj Moshiri, “Akhbar-E Anjoman [News of Association],” *Architect* 1 (1946).39
- 7 Naser Badie, “Elaal-E Peydayesh-E Kuy-Haye Taze: Yousef-Abad, Narmak, Nazi-Abad [Causes of Constrcuting New Neighbourhoods: Yousef-Abad, Narmak, Nazi-Abad],” in *Barresi-E Masael-E Ejtemaae-E Shahr-E Tehran [Investigation of Social Problems of Tehran]*, ed. M Motmaeni and M Hakemi (Tehran: Tehran University Press, 1962).
- 8 UIA is an abbreviation for the International Union of Architects, which was organised for the first time in Lausanne (Switzerland), in 1948. Ali Sadegh and Iraj Moshiri participated in this conference on behalf of the AIAD. Please see: Iraj Moshiri, “Hadaf-E Ma [Our Intention],” *Architect* 1, no. 1 (1946).

- 9 Before publishing the first architecture journal in 1946, many leading Iranian architects and intellectuals published a series of articles in two influential journals named *Farangestan* and *Bank-e Rahni* journal to discuss new ideas regarding urbanism and architecture. In these articles, they acknowledged the relevance of modernism for the urban development and the design of new architectural projects. However, they emphasised that through this process, architects should address the local culture and reinterpret/upgrade the vernacular architecture: please see: Houshang Seyhoun, "Maskan Va Sabk-Haye Meli-E Memari [Housing and the National Architectural Styles]," *Bank-e Rahni Journal* 2, no. 6 (1967).
- 10 Maiken Umbach is a professor of Modern History at the Faculty of Arts at Nottingham. Bernd Hüppauf is an emeritus professor of German at New York University. In their book, named *Vernacular Modernism: Heimat, Globalization, and the Built Environment*, they questioned the concept of homogenous time by focusing on heterogeneity and the polarity of modern experiences, as well as concrete praxis (process of practicing) in particular places. Please see: Maiken Umbach and Bernd Hüppauf, *Vernacular Modernism* (California: Stanford University Press, 2005).1-23
- 11 Saleh Deldam, "The Narmak Neighbourhood," in *A documentary on Tehran's neighbourhoods*, ed. Saleh Deldam (Tehran: IRIB 5, 2011).
- 12 Crawford Stanley Holling, "Resilience and Stability of Ecological Systems," *Annual Review of Ecology and Systematics* 4 (1973).
- 13 *Ibid.*17
- 14 Peter Timmerman, "Vulnerability, Resilience and the Collapse of Society: A Review of Models and Possible Climatic Applications," *Monograph* 1 (1981).
- 15 William. D Callister, *Materials Science and Engineering: An Introduction* (Wiley, 1994).
- 16 Ayda Eraydin and Tuna Tasan-Kok, eds., *Resilience Thinking in Urban Planning*, vol. 106 (Dordrecht, Heidelberg, New York, London: Springer, 2013).2
- 17 *Resilient Thinking in Urban Planning* is the name of a book written by a group of urban planners and researchers, who have increasingly felt the inadequacy of the planning systems and policies introduced to prepare cities for the future in an increasingly neoliberalising world.
- 18 In Persian *Kuy* means the neighbourhood, and *Narmak* means the new city. Therefore, *Kuy-e Narmak* means a very large and new neighbourhood, which is comparable with a city. Please see: A. M Khodayar, "Cheguneh Kuy-E Narmak Bevojud Amad [How Narmak Neighborhood Was Created]," *Journal of Bank-e Sakhtemani* 1, no. 1 (1955).
- 19 Since the Constitutional Revolution of 1906, the king became a representative figure of the country and the prime minister who should be chosen by the parliament has the execution power. Since then, the role of the charismatic Dr. Mohamad Mosaddeq was prominent in national politics. He was best known for championing two major causes: strict constitutionalism at home and an equally strict policy of 'negative equilibrium' abroad to ensure independence from foreign domination. He denounced both the 1919 Anglo-Iranian Agreement and the 1945-1946 oil negotiations with both the Americans and Soviets. He took up the cause of oil nationalisation, demanding that the government should take over the Anglo-Iranian Oil Company. Please see: Abrahamian, *A History of Modern Iran*.
- 20 Anvar Khame-ie, *Eqtasad Bedune Naft: Ebtekar-E Bozrg-E Doctor Mosaddeq [Economy without Oil: A Big Initiative of Dr. Mosaddeq]* (Tehran: Nahid publication, 1996).
- 21 Naser Badie, "Layehe Arazi Mavat [the Law of Dead-Land]," *Journal of Bank-e Sakhtemani* 1, no. 4 (1956).19-20
- 22 This area was equal to one seventh of the then total area of Tehran.
- 23 Khodayar, "Cheguneh Kuy-E Narmak Bevojud Amad [How Narmak Neighborhood Was Created]."
- 24 Badie, "Elaal-E Peydayesh-E Kuy-Haye Taze: Yousef-Abad, Narmak, Nazi-Abad [Causes of Constrcuting New Neighbourhoods: Yousef-Abad, Narmak, Nazi-Abad]."
- 25 Ali Sadegh was the acting- and the vice-president of AIAD. He studied architecture in Austria's Academy of Fine Arts in Vienna, where he met Gabriel Guverkian, an avant-garde architect, who linked Sadegh and some other Iranian architects with Europe's pioneers of the modern movement, such as Henri Sauvage, Le Corbusier, and Robert Mallet-Stevens. Sadegh was involved in the early stages of the *Congreàs Intenationaux d'Architecture Moderne* (CIAM) where his friend, Guverkian served as its general secretary. Please see: <http://www.iranicaonline.org/articles/guevrekian>
- 26 *Architect* was the first journal of architecture in Iran, published by Iraj Moshiri, to diagnose the weaknesses of Iranian cities, and discuss the relevance of the modernism movement to the local architecture. Please see: Moshiri, "Hadaf-E Ma [Our Intention]."<sup>1</sup>
- 27 Khodayar, "Cheguneh Kuy-E Narmak Bevojud Amad [How Narmak Neighborhood Was Created]."<sup>3-5</sup>
- 28 Kenneth Frampton, *Modern Architecture: A Critical History* (London: Thames and Hudson Ltd, 1992).270-71.
- 29 *Ibid.*270-71
- 30 Eric Mumford, *The Ciam Discourse on Urbanism, 1928-1960* (Cambridge, Massachusetts and London, England The MIT Press, 2000).59-103
- 31 *Ibid.*59-103
- 32 Khodayar, "Cheguneh Kuy-E Narmak Bevojud Amad [How Narmak Neighborhood Was Created]."
- 33 Edward Welz was the chief of social affairs in the U.S. Intelligent Service, who wrote a personal letter to Naser Badie (the president of Bank-e Sakhtemani-Tehran Branch) in 5 October 1954. Marcel deBuer was a French architect who visited Narmak, 21 months after the establishment of Bank-e Sakhtemani, and he wrote a personal letter to Hamid Elahi (the head of Bank-e Sakhtemani). Jop Benou was a French professor at the department of architecture, Hanoi University, 1954, who wrote a personal letter to Naser Badie in 8 October 1954. Please see: Naser Badie, "Mokhtasari Az Chand Nameh [Summery of Some Letters]," *Journal of Bank-e Sakhtemani* 1, no. 1 (1955).37
- 34 *Ibid.*37
- 35 This prefabrication system, using concrete as the construction material, had the capacity to produce one house per day. The architects proposed one-story, semi-detached homes with a private yard and typologies of two, three, and four rooms, constructed with 1.10 x 4.40 m panels. Please see: A. M Khodayar, "Avalin Khaney-E Kalad Dar Kuy-E Narmak [the First Kalad House in Narmak]," *Bank-e Sakhtemani Journal* 1, no. 6 (1957).
- 36 *Ibid.*12
- 37 Randy David, "Multiple Modernism and Modernities," in *Non-West Modernist Past on Architecture & Modernities*, ed. S.W Lim and J.H Chang (Singapore: World Scientific Publishing Co, 2012).
- 38 *Chaharbagh* means literally a fourfold garden. It is the typical Persian garden where two broad spines of open spaces divide the garden into four pieces. In addition, a small pool or a pavilion is placed where these spines intersect.

- 39 Rana Habibi and Bruno De Meulder, "Architects and Architecture without Architects: Modernization of Iranian Housing and the Birth of a New Urban Form Narmak (Tehran, 1952)," *Cities* 45 (2015).
- 40 Somaiyeh Falahat and Mohamad Reza Shirazi, "New Urban Developments in Safavid Isfahan Continuity or Disjuncture?," *Planning Perspectives* 27, no. 4 (2012).
- 41 George Nathaniel Curzon, *Persia and Persian Question* vol. I (London: Longmans, Green & Co, 1892).
- 42 Traditionally, Meydan is a collective enclosed domain, where in the middle, a garden is embedded.
- 43 Khodayar, "Cheguneh Kuy-E Narmak Bevojud Amad [How Narmak Neighborhood Was Created]."<sup>7</sup>
- 44 Seyed Mohamad Beheshti is an Iranian philosopher, scholar, landscape designer, and a scientific board member of the Iranian Heritage organization, who extensively investigated the characteristics of the Persian garden.
- 45 Seyed Mohamad Beheshti, "Jahan Bagh-E Irani [the World of the Persian Garden]," *Golestan-e Honar* 11 (2008).
- 46 Hayat means literally an enclosed yard with a small garden including trees and flowers and brick paving in geometric patterns around a small central pool of water. Sleeping outdoor in the hayat was customary in the warmer seasons, in Iran. And the yard was used as an outdoor room.
- 47 Naser Badie, "Taghsim-E Zamin Alaj-E Bikhanevani Nist [Land Distribution Is Not the Solution of Homelessness]," *Journal of Bank-e Sakhtemani* 1, no. 2 (1955).31-34
- 48 To avoid construction of houses with improper material, Banke Sakhtemani provide a material mortgage for whom wanted to build their own houses. Through a technical supervision, the architects wanted to address the needs for sanitation, tap/drink water, and drainage/insulation. Please see: *ibid.*31-34
- 49 Umbach and Huppau, *Vernacular Modernism*.1-23
- 50 Habibi and De Meulder, "Architects and Architecture without Architects: Modernization of Iranian Housing and the Birth of a New Urban Form Narmak (Tehran, 1952)."
- 51 Abbas Adjadi, "Nokati Ke Dar Tarh-Haye Kuy-E Narmak Va Nazi-Abad Ra'yat Shodeh Ast [the Points Taken into Consideration in Narmak and Nazi-Abad Proposal]," *Journal of Bank-e Sakhtemani* 1, no. 4 (1956).22
- 52 *Ibid.*22
- 53 Seyed Mohsen Habibi, *Az Shar Ta Shahr: Tahlili Tarikhi Az Mafhum-E Shahr Va Sima-Ye Kalbudi-E an Tafakkur Va Taassur [De La Cite a La Ville-Analyse Historique De La Conception Urbaine Et Son Aspect Physique]* (Tehran: University of Tehran Press, 1999).
- 54 Ayda Eraydin, "Resilience Thinking for Planning," in *Resilience Thinking in Urban Planning*, ed. Ayda Eraydin and Tuna Tasan-Kok (Dordrecht, Heidelberg, New York, London: Springer, 2013).28
- 55 According to Peter Rowe, this was a period for "a restricting of industries in search of economies of scale, rather than a resizing", through which the modernisation was focused on time-management, efficiency, and mass production. In this process, the modern city was a tool to improve transportation against overcrowding, and to house a new worker-type, named employee (the white collar-worker), for the management and service sectors. As a result, cities started growing with decentralised patterns of settlement and suburbanisation. Please see: Peter. G. Rowe, *Modernity and Housing* (Cambridge and London: The MIT Press, 1993).8-9
- 56 Falahat and Shirazi, "New Urban Developments in Safavid Isfahan Continuity or Disjuncture?."
- 57 *Ibid.*
- 58 According to Abrahamian, in the new development caused by modernisation, "the old neighbourhood structure, based on sect identities, had withered away; the new districts were, instead, based on class, income, and occupation". Please see: Abrahamian, *A History of Modern Iran*.120
- 59 Khodayar, "Cheguneh Kuy-E Narmak Bevojud Amad [How Narmak Neighborhood Was Created]."<sup>5</sup>
- 60 Robbie B. H. Goh, *Contours of Culture: Space and Social Difference in Singapore* (Hong Kong University Press, 2005).151
- 61 The freedom of entry and exit and the competition between buyers and sellers ensures the liberty of persons. Please see: *ibid.*145
- 62 Francis Heylighen, *The Science of Self-Organisation and Adaptivity* (Free University of Brussels: Center "Leo Apostel", 2002).
- 63 Eraydin and Tasan-Kok, *Resilience Thinking in Urban Planning*.6
- 64 Pierre Bourdieu, who was inspired from the work of the art historian Erwin Panofsky, defined habitus as a "system of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organise practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. Please see: Pierre Bourdieu, *The Logic of Practice* (Stanford, California: Stanford University Press 1990).53

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## Image Sources

Fig.01: *Bank-e Sakhtemani Journal* 1, no. 2 (1955).

Fig.02: Author, based on the model image published in *Bank-e Sakhtemani Journal* 1, no. 2 (1955).

Fig.03: *Bank-e Sakhtemani Journal* 1, no. 6 (1956).

Fig.04: left: <http://web.mit.edu/4.611/www/L15.html>, Accessed February 2015, right: Author, based on the model image published in *Bank-e Sakhtemani Journal* 1, no. 2 (1955).

Fig.05: *Bank-e Sakhtemani Journal* 1, no. 1 (1955).

Fig.06: National Cartographic Centre, Tehran. Accessed December 2015. The last two images and the analytical drawings by the author.





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# Mapping the Neighbourhood: Ideologies and Tools Shaping Twentieth- century Urban Visions

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Chair: *Patrizia Bonifazio and Gaia Caramellino*



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# MILAN AS A LAB: THE LENS OF PLANNING AGREEMENTS TO UNDERSTAND HOW THE CONCEPT OF NEIGHBORHOOD IS TRANSLATED IN THE LOCAL CONTEXT

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This proposal deals with the role the concept of neighborhood had in the definition of the contents of planning agreements between 1930s and 1970s in Italy, with a particular focus on the city of Milan. Planning agreements, in their national definition of *convenzioni urbanistiche*, are arrangements between the public administration and private or public actors; they concern the control and organization of interventions on the territory and reciprocal commitments. Born at the end of the 19th century, they were officially mentioned in the legislation only with the National Planning Law of 1942; their relationship with the general planning instruments was not made official until 1967. A parallel system of regulation not included in the directions of the General Plans thus originated, mirroring the balance of power between public and private actors. But even in the two post-war periods, when rapid urbanization was mainly due to private funding, most of the planning agreements consisted in a direct implementation of the Plans – overcoming their complex bureaucratic procedures – rather than in codified dismantling of municipal policies as has been widely assumed. From a planning perspective, planning agreements have been investigated mainly in relation to negotiations on parcelling plans and social housing, with particular attention to the suburban expansion of the main cities in the second post-war period. In this context, the reference to the neighborhood – even if frequently simplified – is recurrent: the standardization of the contents of planning agreements linked to the new legislation of the 60s focuses on the key features of neighborhood for the definition of residential layouts, infrastructures, and services. However, planning agreements were also widely used in building up city centers and well before the legislation framed their features. Case studies from the 30s and 40s in the historic center of Milan highlight how some aspects related to a design-oriented declination of neighborhood were the object of groups of planning agreements related to specific area or blocks, thus suggesting a private interest for these aspects and a possible influence of this concept even before the Italian reconstruction and the economic boom. In this paper, planning agreements are proposed as a tool of investigation of the relationship between planning instruments, models, and actors: in the interwar period they promoted – even of not completely consciously – some aspect of the concept of neighborhood which was further articulated in the second post-war, declining at a local level international rethorics and imageries. Case studies, differentiated for period and urban localization, exemplifies the potentialities of the tool and the variety of relation with the concept of neighborhood.

## **Keywords**

Neighborhood, Milan, Planning agreements



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# CITIES NOT SETTLEMENTS, OR WHY LOOSE DOESN'T FIT: HANS SCHMIDT'S MODEL OF THE SOCIALIST HOUSING COMPLEX AND THE COMPETITION FOR BERLIN-FENNPFUHL

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This paper seeks to revisit the competition for the Fennpfuhl district in 1956/1957, the last competition in which architects and planners from both parts of Berlin and from East and West Germany participated, and the debate it instigated in the GDR about the form of the socialist city. The winning entry by Ernst May, who had returned from Kenya to West Germany in 1954 in order to become planning director of the housing construction company 'Neue Heimat' in Hamburg, soon became the subject of criticism in the official architectural journal 'Deutsche Architektur'. Hans Schmidt, who had moved from Switzerland to East Berlin in 1955 to work at the Institut für Typung, polemicised against May's proposal for the neighbourhood, refuting his idea of a loosely structured cityscape which became characteristic for the reconstruction of West German cities, and proposed instead the model of an ordered socialist housing complex as the basic unit for the socialist reconstruction of cities. At the heart of Schmidt's critique was the issue of urban form. Form, according to Schmidt, distinguished the socialist housing complex from the Western neighbourhood. While the neighbourhood and its historic precursors, the garden city, and 1920s settlements (Siedlungen), sought to dissolve the city, the socialist housing complex was seen as an expression of the 'collective nature, the common and unifying character' of human settlement. The housing complex in Schmidt's view went beyond statistical problems of planning material supply and communal services, as it formed a spatial unity that could be perceived by its residents. Thus far, Schmidt's critique of the 'disorderly' arrangement of housing in May's scheme has chiefly been read ideologically; that is, within the arguably narrow historic and, at the same time, highly politically charged context of the late 1950s, as an indicator of the deteriorating relationships and growing resentment in the wake of the 'Hauptstadt Wettbewerb' of 1957/1958. This paper proposes to take into account Schmidt's revision of his own position toward town planning during his time as chief planner of the city of Orsk in the Soviet Union in the late 1930s, following May's own departure from the USSR. While May's proposal for Fennpfuhl was deferred and eventually never implemented, Schmidt's notion of the socialist housing complex as an urban architecture, also remained a road not taken by East German planners in the 1960s, as this paper will show by pointing to a number of exemplary projects. His understanding of the socialist housing complex did not readily square with either the demands of building production or later speculative proposals for megastructures, which drew on Western precedents as well as reinterpretations of 1920s radical designs for collective living.

## **Keywords**

Neighborhood, Socialist housing complex, 1950s, Berlin, Hans Schmidt, Ernst May, GDR, Soviet Union



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# FROM COMMUNITY PLANNING TO NEIGHBORHOOD AND BACK: SPATIAL DEVICES AND POLITICAL ORGANISATION IN THE PROJECT OF COMUNITA (1946-1968)

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In the immediate aftermath of the War, Italian architecture magazines began publishing articles on examples of the so called “neighborhood units” capable of providing a new settlement model and a design method to rebuild and modernize the country. These articles described the direct and in-depth knowledge of American examples that had been implemented between the two wars and during the last war: the “neighborhood” concept – in its different translations as district, neighborhood unit and community – will become a frequent topic of discussion among Italian city planners and architects, and it will also turn into one of the most original and important instruments to understand the concept of reconstruction itself, as well as a fertile ground of exchange between the Italian and the American architectural culture for over a decade. This paper aims at presenting the different forms of dissemination of the “neighborhood” concept in Italy, by underlining how well rooted it is in some space-related strategies that will have a peculiar, if not obvious, political outcome. This paper focuses on the program proposed by Comunità, a magazine and political movement founded by Adriano Olivetti – industrialist and prominent personality in the Italian and international cultural and architectural debate since the Thirties. Since 1946 until the second half of the Fifties, Comunità represented one of the most interesting design arenas, and aimed to investigate the combination of shapes and positions the “neighborhood” concept would express in the Second World War. Based on the recovery of the personal library of Adriano Olivetti, the library that was to be found in the factory plant starting in the Thirties, on the readings, the documents, the enriching exchanges and the contacts of this Piedmontese industrialist in the years 1944-1945 when he was in Switzerland as refugee, my paper tackles the roots of the Community proposal in the cultural world of production engineers and American technicians who were dealing with the programs of the New Deal; it also discusses how their technical proposal affected the methods of use and the subsequent development of the “neighborhood” concept in the various areas of work promoted by Olivetti, in particular in his role as President of the City Planning National Institute. Community, meant as political Movement, allows to shift the focus on how the concept of Community itself embraced the initial proposal of Olivetti; it thus becomes a technical tool for converging ideologies that could not be superposed and for alternative proposals that will become widespread in the reconstruction process.

**Keywords**

neighborhood, community, 20th century





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# CIAM 8 – THE HEART OF THE CITY AS THE SYMBOLICAL RESILIENCE OF THE CITY

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The “Heart of the City”, title of the 8th CIAM held in 1951, is a contradictory and pervasive figure of speech which has marked a thinking and urban transition after the Second World War. In 1951, two opposite urban conditions are considered by Sert, President of CIAM, as main issues which the discourse on the Heart should face: the disappearance of city centres because of the destruction of war and the negation of urban centrality due to urban sprawl and the constant enlargement of city boundaries ad infinitum. However, the Heart itself also represents two different figures of speech, the symbol and the metaphor. On the one side it becomes a humanist symbol ‘which springs directly to the senses without explanation’, as stressed by Giedion during CIAM 8; on the other, the Heart retains its anatomical and metaphorical organic meaning though translated into the presumed correct physical form and dimension of the city. Analyzing the CIAM 8, the paper investigates these Post-war urban tensions, which lie at the crossroads of intellectual-theoretical and architectural-design worlds. The aim of the paper is to analyze and re-interpret these complex theoretical layers of significance of the Heart between reconstruction and recentralization within the Modern Movement in the 1950s.

#### **Keywords**

Heart of the City, CIAM 8, reconstruction, recentralization, symbol, metaphor

#### **How to Cite**

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## INTRODUCTION

The years after the Second World War coincided within CIAM (Congrès Internationaux d'Architecture Moderne) – ‘the official Establishment of architecture in our time’<sup>1</sup> as it was defined by Banham - with a passage from orthodox functionalism to open humanism, from the abstract machine-age interpretations to other ‘regional variation, history, and politics as well as socio-economic and anthropological interpretations.’<sup>2</sup> (Grahame Shane) This critical passage was already evident in 1951 during the CIAM 8, held in Hoddesdon, twenty miles from London, from July 7th to 14th, 1951. The Heart traced the shift from the analytical, ‘universalist and exclusive approach’<sup>3</sup> (Pedret) of both theoretical and urban compartmentalization of the orthodox pre-war CIAM to a comprehensive synthetic idea of anthropological habitat.<sup>4</sup> Indeed the Heart became part of the new humanism and existentialism, as already highlighted by de Solà- Morales<sup>5</sup> and Curtis<sup>6</sup>. It even ‘represented the collapse of Modern Architecture’<sup>7</sup> according to Grahame Shane, becoming a counterforce of the zoning method of planning, of the division into four functions (dwelling, work, recreation and transport) of the Charter of Athens, to the rational development methods of ‘The Functional City’ of the 1930s.

However, even though this passage at CIAM8 was clear, the problematic issue of finding a correct definition or even a single theoretical frame of the heart theme seemed to haunt CIAM 8. Indeed many of the architects present in Hoddesdon showed and expressed several significant personal - and sometimes contrasting - features of the discussed theme, as Welter already underlined<sup>8</sup>: an ‘aggregation of individuals’ (Giedion), an ‘element which makes a community a community’ (MARS), a ‘natural expression of contemplation...of Italian dolce far niente’ (Rogers), a ‘background of spontaneity’ (Johnson), a ‘meeting place of the arts’ (Le Corbusier), and so on.

More particularly the complexity and the difficulty of interpreting the Heart of the City, and its “imponderable nature”<sup>9</sup>(CIAM 8) were mostly caused by its Janus-faced semantic load: the metaphorical and the symbolic. This lack of clarity regarding the organic metaphor/symbol, and its overlapping presence was already expressed by Gropius in December 1949, when answering the MARS proposal he admitted to come across ‘a great confusion and misunderstanding of what the organic elements or heart organs should be’.<sup>10</sup>

As an organic metaphor, the urban structure mirrors the presumed physical properties of the organ: the urban heart is compared with an organ of limited size and growth, with a precise position and relationship with other organs, and whose function is to pump blood. The heart became a functionalist metaphor of restoration of connections and cohesion between urban limbs. As a symbol the heart involved a more ‘Abstract Idea’<sup>11</sup> as described by the Dutch Opbouw Group in Hoddesdon, referring to an ‘element of urban culture’<sup>12</sup> (Avermaete), with a social and humanist aim. It is focused on the relationship between the physical space and society, always implying an emotional investment as stressed by Giedion. The symbolic element of the Heart was a clear reference also to the previous theories of the biologist Patrick Geddes (Bosman<sup>13</sup>- Welter<sup>14</sup>). His ‘ardent disciple’<sup>15</sup> Jaqueline Tyrwhitt had certainly a pivotal role in outlining the Geddesian ‘true town plan’ based on ‘the supreme organs of the city` s life’<sup>16</sup> which enhanced the shift of CIAM 8 towards ‘a new humanism and post-modern globalism,’<sup>17</sup> according to Shoshkes.

Finally, in front of this ambivalence between the functionalist metaphor and the humanist symbol, a general frame of interpretation of the Heart theme is still lacking and there is still a narrow use of the ‘Heart of City’ theme in some contemporary urban theories and projects. Hence this paper aims to shed light on the productive theoretical ambiguity which occurred in Hoddesdon, focusing particular attention on the balance, dichotomy, semantic interpretations and influences of the issues of reconstruction and recentralization which characterized CIAM 8 and where the ambivalent symbolic or metaphoric essence of the Heart is better highlighted. As clearly exposed in the words of CIAM’s president Sert, the debate about the Heart of the City faced the resilience of the decontextualized social-spatial tabula rasa created by the dangerous mechanical progress which led to the horror of the War. But it also dealt with the resilience of embracing, stemming, and compressing the Galileo scandal, ‘the constitution of an infinite, and infinitely open space’<sup>18</sup>, as later described by Foucault in the 1960s, which was, for the first time, mirrored in the urban sprawl.

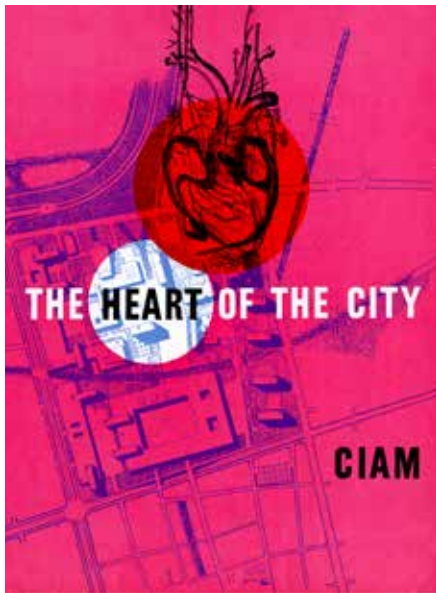


FIGURE 1 Book Cover, The Heart of the City. The subtitle of CIAM 8 – ‘Towards the humanisation of urban life’ – was aimed at revealing this urgency in relation to the Heart’s symbolical interpretation.



FIGURE 2 Hiroshima after the atomic destruction of the War.

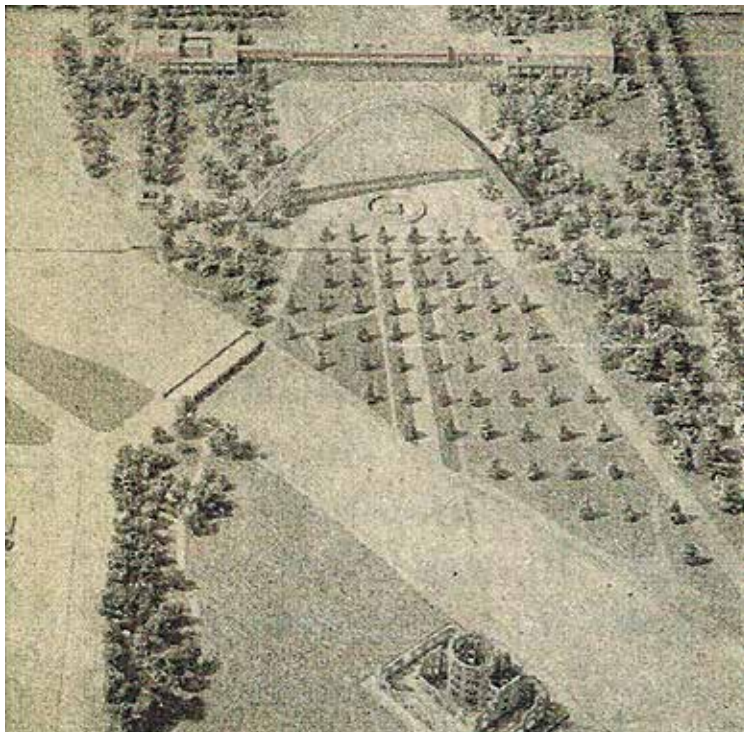


FIGURE 3 Kenzo Tange, Hiroshima Peace memorial park, 1951.



FIGURE 4 Kenzo Tange, Hiroshima Peace memorial masterplan, 1951. The proposal aims to resume the synergy between symbol, monument and heart.

## RECONSTRUCTION AND SYMBOLICAL PRESENCE OF THE HEART

Many projects concerning the reconstruction of bombed urban centres were presented at CIAM 8: for instance the heart projects for Coventry, Basle, Providence, Lausanne and so on.

However the topic of reconstruction was treated using different perspectives and nuances.

For instance at CIAM 8 W.J. Holford highlighted the commercial aspect of the inner cores, focusing attention on the reconstruction of the commercial inner land area of London<sup>19</sup>. With similar attention focused on the commercial side, J. Alaurant- sociologist at the French Ministry of Reconstruction<sup>20</sup> - presented a comparison between the inner Cores of New York, Paris, Venice and London admitting astonishment on discovering that in the 18th century these cities had inner commercial centres that were proportionately roughly the same size.

Political supremacy as cause of the destruction of the Core was instead raised by Peressutti. Indeed the Italian Architect lamented the destruction the little Core in Rome which occurred with the disembowelment of part of the old borgo in favour of a scenographic link between the San Pietro Church and the Tiber river<sup>21</sup> which was an expression of a political Conciliation between Fascism and the Vatican. 'Piacentini (Mussolini's favourite architect), with an incredible lack of artistic sensitivity, destroyed the approach to Bernini's colonnades' - Giedion reiterated Peressutti's concern, highlighting also an analogy between the Baroque and Fascist urbanism when dealing with the problem of opening this area.<sup>22</sup>

Le Corbusier's project for the reconstruction of St. Die was instead exalted for its sculptural aspects. In particular Giedion later praised it as a brand new urban model of 'sculptural interrelations' of buildings sustained by a basement, as in Piazza Duomo in Pisa.<sup>23</sup> St. Die project was considered by the Swiss historian as the first modern example where monumentality and symbolism gained a modern connotation, which was an expression of the spirit of the time. The same sculptural interrelation praised by Giedion, however, was vehemently criticized in the 1970s by Rowe and Koetter in 'Collage City'<sup>24</sup> where San Die is condemned for the prevalence of the 'object' instead of the 'space' which 'has shrunk to an apologetic ghost' the quality of public space.

Nevertheless, among all reconstruction projects, the most intense and emblematic one, which better resumed the synergy between symbol, monument and heart in relation to the destruction of the War, was Kenzo Tange's Hiroshima Peace memorial park.

Tange's project was a tragic and dramatic attempt to rethink the 'fundamental attitudes towards existence' within the nihilism left by the War: 'How many bodies had been burnt to a cinder by the intense heat?' -Tange asked himself - 'Losing the war meant the re-thinking of fundamental attitudes towards existence...It was almost as if one of nature's basic laws had been shown to be false.'<sup>25</sup>

Hiroshima, one of the two cities devastated by the atomic bomb, was one of the major symbols of the horrible destruction of the War. Tange presented a fifteen-year program of reconstruction which mirrored the decision of the people of Hiroshima 'to stand for peace and [...] to demonstrate it to the world by moulding their ruined community into a monument of permanent peace.'<sup>26</sup>

The master-plan thus provided a Peace Hall, a Peace Park, a Peace Boulevard and international hotels and dormitories, which were arranged with an axial composition centred on the memorial cenotaph, in order 'to create a unique ethos that would inspire the city's reconstruction.'<sup>27</sup> The entire city, rather than a single monument, became a symbol of peace: the new plan for Hiroshima was indeed called the 'Peace City.'<sup>28</sup> This project became a relevant case study. Indeed it raised the issue of symbolism at CIAM 8, as already highlighted by Zhongjie Lin.<sup>29</sup> The heart remained an abstract symbolical expression of Peace which had to be translated into

socio-spatial form by the architect. The topic of reconstruction was not merely a physical, urban structural issue. It concerned an abstract symbolical value, always implying “the physiological and biological values of sentiment,” as depicted by Rogers at CIAM 8. It answered to necessity of “signs and symbols which spring directly to the senses without explanation” as praised by Giedion in Hoddesdon quoting the French philosopher Jean Paul Sartre and referring to the psychologists’ experience of the school of Würzburg. Tange himself later stressed the symbol as ‘an important subject in architecture or in the arts’; in front of this presence the architect had to think ‘what is the symbol of the day, where the symbol reveals itself, and how the symbol is created.’<sup>30</sup>

Similarly to Tange, also Siegfried Giedion, underlined the pivotal role of the abstract, humanist interpretation of the Heart during CIAM 8. Giedion highlighted the Heart as a new social symbol of an appropriate relationship between the private and public realm, between collective and individual activities, between ‘You and Me.’<sup>31</sup> For the Swiss historian the heart was symbol of a collective social idea; it was major example of the rising ‘emotional life’<sup>32</sup> of ‘the human being as such – the bare naked man’, in contrast to the ‘tyranny of mechanical tools’<sup>33</sup> which led to ‘the blood and horror’ of the Second World War. Similarly also Jaqueline Tyrwhitt later reconsidered the most important aspect of the Core as ‘no-thing’, its ‘emptiness-a space that can be filled with human emotions.’<sup>34</sup> Even more radically abstract, the Dutch member Bakema depicted the ‘moment of the Core’ as a pure system of ‘relationship between man and things’<sup>35</sup> at CIAM 8. The Heart was conceived as representative or symbol of a collective social ‘abstract idea [...] fluctuating from one place to another’<sup>36</sup> (Group Opbouw). Neither new urban centres nor reconstruction proposals were first exposed by Bakema. The Cemetery of Asplund became instead the first provocative example proposed by the Dutch Architect in order to express the abstract entity of the symbolic heart, highlighting the importance of the relationship between life and death, social and physical structure, interior and exterior, urban and landscape.

Finally, the necessary reconstruction of the symbolical Heart as ‘total relationship’, filled with human emotions echoed and introduced to CIAM Buber’s dialogic philosophy about ‘Ich und Du’ (1923, ‘I and Thou’)

His philosophy based on dialogue, the in-between, - ‘Zwischen’ - was brought to the fore by the young architects Gutmann and Manz in Sigtuna one year later in 1952. Here the topic of habitat reiterated CIAM 8’s approach to the social-spatial quality of the built environment and to an ‘epistemological shift towards the ordinary everyday life’<sup>37</sup> (Avermaete), even becoming a manifesto of ‘the prehistory of TEAM 10’<sup>38</sup> (Mumford). The symbolic presence of the Heart influenced later Habitat’s multidisciplinary approach within Team 10, its anthropological definition and its critiques to the factionalist analytical urban division.

## RECENTRALIZATION AND METAPHORIC REPRESENTATION OF THE HEART

At CIAM 8 president Josep Lluís Sert introduced the issue of the dangerous negation of the urban centrality because of urban sprawl and the constant enlargement of city boundaries.

This negation of centrality was approached by Sert as another form of destruction, but a kind which concerned ‘[...] a real menace to all our cities and to the stability of civic values’<sup>39</sup>, rather than the bombed centre.

This need to recentralize the city had already been stressed in previous congresses. For instance, Le Corbusier’s Ville Radieuse was already an example of increasing densities within the city in the `30s, since ‘extreme manifestations of vitality are to be found in places of great concentration’<sup>40</sup>. From Sert’s point of view, the idea of the heart with its organic characteristics of limitation, specific size and dimension which has to be translated into a correct, human-scale urban form remained of paramount importance.

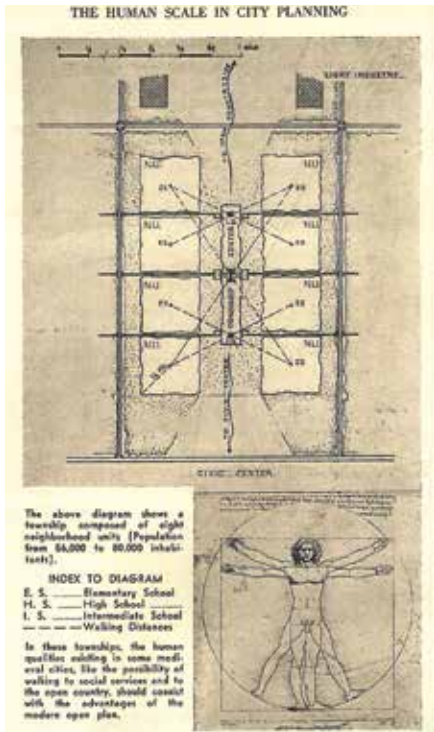


FIGURE 5 Sert J.L., 'The human scale in City Planning', 1944. The main aim of the diagram and of the organic metaphor, was the rescue of the 'civic values' inside a urban structure which, for the first time in history, was going to be profoundly deformed.

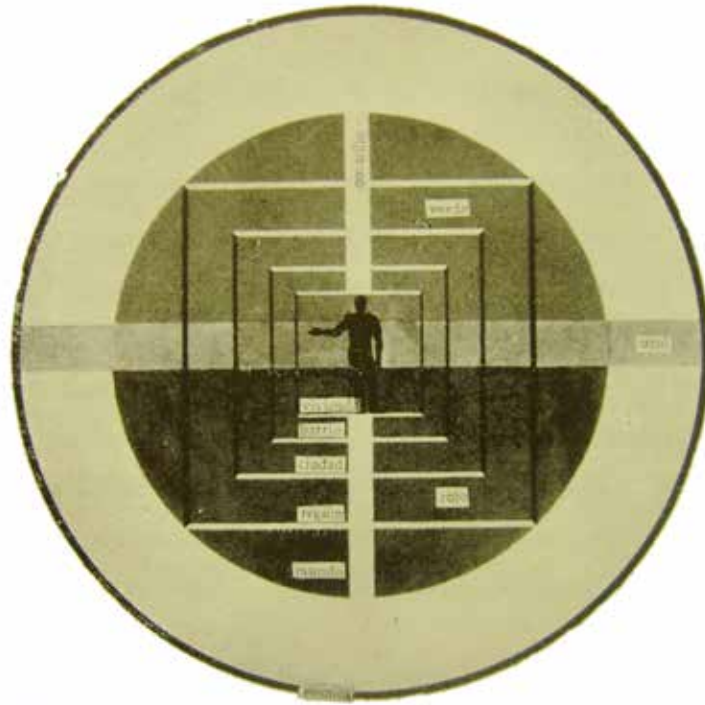


FIGURE 6 P.L., Wiener, 'Diagram of the human environment', 1953. The diagram shows the biocentric relationships between Man and the environment.

For instance, as early as 1944, in his essay entitled 'The Human Scale in City Planning'<sup>41</sup>, he compared one of his plans to the Vitruvian Man by Leonardo da Vinci, in order to highlight the human dimension of the city itself. In his diagram Sert emphasized the humanization of the city through the strict connections between eight neighbourhood units or organs, using the organic metaphor as counterforce of the decentralized patterns. The proximity and the limited size and the defined relations and functions of the organs aimed to recreate the human qualities existing in some medieval cities, which were menaced, in the political economic conditions of the post-war world. Similarly, in 1953 his collaborator Paul Lester Wiener published, in *Nuestra Arquitectura*, the 'Diagram of the Human Environment'<sup>42</sup> where Man is inscribed inside a system of squares symbolizing the home, the neighbourhood, the city, the region and a final circle representing the world and the cosmos<sup>43</sup>.

For both architects, recentralization became the predestined cure for the city's survival. In other words the city should be 'like the comic definition of a cannon'<sup>44</sup> - Sert quoted the philosopher Ortega y Gasset at CIAM 8 - with a well-defined and impenetrable boundary between an internal civic space and an external 'geo-botanic cosmos'. In 1954, the Italian Philosopher Enzo Paci vehemently criticized Sert's metaphor. In his article 'Il Cuore della Città' (The Heart of the City) the Italian philosopher foresaw Sert's conservative, anachronistic metaphor of the cannon as the cause the isolation of the city itself, 'even if perfect, as the stellar city of the Filarete.'<sup>45</sup> With regard to decentralization and recentralization, Paci conversely reckoned that the city should be considered as a point of junction between the closed and the open, 'with a centripetal diastolic movement, but, at the same time, a systolic centrifugal one'.<sup>46</sup> This had many resonances with Bakema's ideas and later TEAM 10's assumptions about Habitat. Indeed similar critiques would be developed within Team 10's debate. In the latter, the Vitruvian Man inscribed in the limited and absolute boundaries of the circle, similar to the cannon's, was 'no longer in the middle (au milieu)<sup>47</sup> (Canguilhem); in his place the complexity, contradictions and relationships of the entire open social-urban structure became the most intensive point of the scale of association of Geddes' Valley section, as reinterpreted by the youngsters of Team 10.

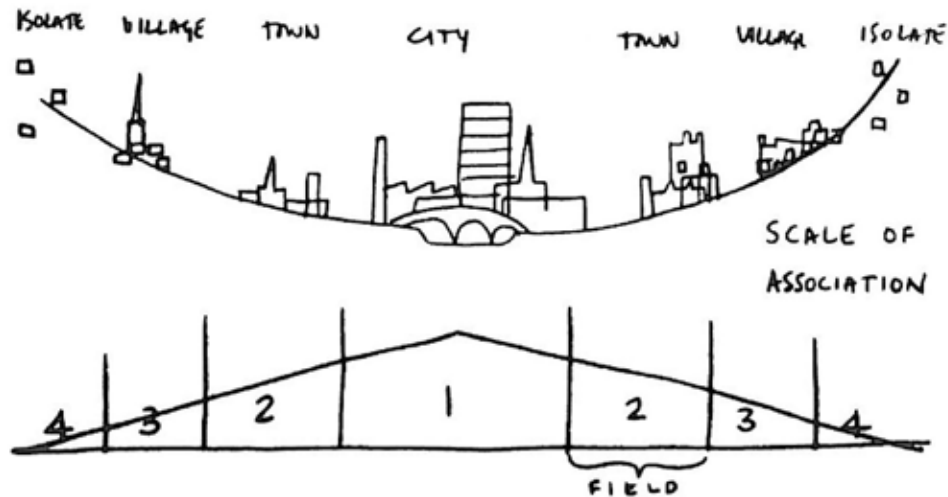


FIGURE 7 Team 10: Scale of Association (first in 1953); Reinterpretation of Geddes Valley Section by adding a comparative and synchronic ‘Scale of Association’. It is no longer the barycentric Vitruvian Man at the centre of the world, but the relations inside the community, the social complex structure which should be physically interpreted by the architect.

Finally, a few years after the meeting at Hoddesdon, Sert reiterated his ideas relying on the younger generations as his main urban-minded supporters: ‘The younger generation in this country [...] has become aware that the uncontrolled sprawl of our communities only aggravates their problems, and that the solution lies in the re-shaping the city as a whole. The necessary process is not one of decentralization, but one of re-centralization.[...] We must be urban minded.’<sup>48</sup> This was 9th April 1956 and Sert was talking at the First Urban Design Conference held at Harvard University in USA, where he was appointed as Dean in 1953.

While Team 10 dismissed the old avant-garde of CIAM, overseas the continuity of CIAM’s discussion about the heart as a conservative metaphor of a necessary container or cannon of civic centrality was resilient and it gave rise to the birth of the Urban Design Discipline within the American context. If the roots of CIAM 8 can be traced also in American neighbourhood theory and in a constant transatlantic exchange of ideas between the USA and Europe since the 1930s (Domhardt<sup>49</sup>), in the 1950s the Heart of the City certainly became ‘the precursor of Urban Design’<sup>50</sup> in the US, as Eric Mumford already stated, relying on the metaphoric heart, the recentralization, the densification, the organic connections of the urban structure as main concerns of departure.

## CONCLUSIONS

CIAM 8 embodied a deep complexity of values and significance which can be hardly compressed within the mere issue of Post-war reconstruction, as erroneously generally thought<sup>51</sup>. The same issue of reconstruction enhanced different arguments about the commercial, political, sculptural and symbolical aspect of the heart.

Both Tange’s project for Hiroshima as symbol of peace and Sert’s plea for a metaphorical cannon, respectively faced two kinds of destruction: the former tackled the radical and the most tragic grubbing of all forms of life and human constructions; the latter concerned the abandonment of a traditional form of the city. They revealed the double entity of the Heart as a resilient reconstruction, namely its symbolical abstract presence and its metaphorical organic physical cohesion.

Moreover the Heart relied on a contradictory discourse which enhanced and stimulated urban design and thinking when faced with the radical urban transformation of the city which globally occurred during and after the War.

From the tangible binomial reconstruction-recentralization of the urban Core and the symbolical abstract resilience of the Heart as a constituent element at the foundation of the urban structure, the heart introduced an anthropological idea of Habitat as an integrating part of the human settlement, later developed within TEAM 10. It also deeply influenced the Urban Design in the US. Hence the Heart became a resilient trans-national and trans-institutional idea 'as a reference point for the new forms of public space.'<sup>52</sup>(Mumford)

However, if the Heart of the City is the 'question of the reform of the structure of the city through the creation of centres of social life'<sup>53</sup> – as praised by Le Corbusier – the failures of CIAM (Frampton<sup>54</sup>) and of the First Urban Design Conference (Alexander<sup>55</sup>) were surprisingly caused by the incapacity of a 'significant invention of new structure in the realm of urban space'<sup>56</sup>. Therefore the idea of Heart with its countless interpretations remains a theoretical ground that is still fertile and open for further interpretation and investigation.

### Disclosure Statement

No potential conflict of interest was reported by the author

### Notes on contributor

Leonardo Zuccaro Marchi started his research in Architecture during his Diploma at A.S.P. (Alta Scuola Politecnica), obtaining a double degree at both Politecnico di Milano and Politecnico di Torino. Over the years he developed a strong liking for the urban theme concerning the "Heart of the City" - the theme of the CIAM 8 - from both the historical as well as the theoretical approach. In 2011 he was Collection Research Grant Recipient at CCA in Montreal. In 2013 he obtained a double PhD from both TU Delft and IUAV. In 2014-15 he was Postdoc fellow at KTH.

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Figure 2-3-4: Tange, Kenzo. "Hiroshima". in *The Heart of the City: Towards the humanization of Urban life*. Edited by Rogers E. N., Sert J.L., Tyrwhitt J. New York: Pellegrini and Cudahy, 1952, 137-138

Figure 5: Sert, Josep Lluís. "The Human Scale in City Planning". In *New Architecture and City Planning*. Edited by Zucker P. New York : Philosophical Library, New York, 1944, 405

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Figure 7: Smithson, A., *The Emergence of Team 10 out of CIAM*, London, 1982

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- 1 Banham, *The Architecture of the Well-tempered Environment*, 143
- 2 Grahame Shane D., "The Street in the Twentieth Century. Three Conferences: London (1910), Athens (1933), Hoddesdon(1951)", 41
- 3 Pedret, 2002.
- 4 Later CIAM and TEAM X's discourse about Habitat reiterated Heart's multidisciplinary approach, its anthropological definition and its critiques to the factionalist analytical urban division. The discourse about Habitat fostered the complex topic of the human relationship with its social-spatial context, whose research already started with the Heart of the City- CIAM 8 discourse.

- 5 de Solà- Morales, *Architecture and Existentialism*, 49
- 6 'Humanism was an organizing principle in architectural thinking in the post-war period, both in terms of reconfiguring traditions and seeking lost or exotic alternatives. But humanism also implied a new mode of sensitivity to values which responded to recent experiences of totalitarianism and scientifically planned mass destruction.' Curtis, *The Heart of the City*, 52
- 7 See note 2 above.
- 8 This variety of definitions has already been listed by Welter in order to highlight the continuity of CIAM 8 with Mumford's social core, Reclus' communal city center, Geddes' cultural Acropolis and Taut's city crown. Welter, "From locus genii to heart of the city: embracing the spirit of the city", 52
- 9 CIAM, *The Heart of the City: Towards the humanization of Urban life*, 165
- 10 Walter Gropius, December 22, 1949 Letter to Mr. Wells Coates, cc. Giedion and Sert. Eth/gta 42/SG/34/54
- 11 Opbouw group, CIAM 8 describing the core of Pendrecht, responsible rapporteur: W. Wissing. Bakema Archive, NAI, Rotterdam, g. 18
- 12 'The term CORE was not referring to a purely physical matter, even to a social issue [...] Briefly, it referred to an element of urban culture.' Avermaete, *Another Modern*, 71
- 13 Bosman, "My association with CIAM gave me new perspective"
- 14 Welter, "From locus genii to heart of the city: embracing the spirit of the city"
- 15 Bosman, "My association with CIAM gave me new perspective", 478
- 16 'the true town plan [...] develops onward to the supreme organs of the city's life- its acropolis and forum, its cloister and cathedral.' Geddes, *Cities in Evolution*, 71. Bosman, "My association with CIAM gave me new perspective", 483
- 17 Shoshkes, "Jaqueline Tyrwhitt and transnational discourse on modern planning and design, 1941-1951," 263
- 18 Foucault, "Of Other Spaces, Heterotopias"
- 19 Holford, "The Commercial Core of London", 97
- 20 Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, 211
- 21 Peressutti, "Discussion on Italian Piazzas", 79
- 22 Giedion, "Discussion on Italian Piazzas", 79-80
- 23 Giedion, *Architecture and the Phenomena of Transition, the three space conceptions in Architecture*, 270
- 24 Rowe, Koetter, *Collage City*, 65
- 25 Riani, *Kenzo Tange (20th Century Masters)*, 8
- 26 *Ibid.*, 137
- 27 Lin, *Kenzo Tange and the Metabolist movement. Urban Utopias of Modern Japan. Urban Utopias of Modern Japan*, 178
- 28 Tange, "Hiroshima", 136
- 29 See note 26 above
- 30 Tange, Kenzo. "Function, Structure, Symbol"
- 31 Giedion, *Architecture You and Me*
- 32 *Ibid.*, 37
- 33 Giedion, *Historical Background to the Core*, 17
- 34 Shoshkes, *Jaqueline Tyrwhitt: A Transnational Life in Urban Planning and design*. [T.40]
- 35 Bakema, "Relationship between Men and Things", 67
- 36 Opbouw group, "CIAM 8 describing the core of Pendrecht, responsible rapporteur: W. Wissing". Bakema Archive, NAI, Rotterdam, g. 18
- 37 Avermaete, *Another modern*.  
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- 38 Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, 224
- 39 Sert, "Centres on Community Life", 4
- 40 Le Corbusier, Response to Moscow, translated and quoted in Cohen, *Le Corbusier*, 139. Quoted in Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, 46.
- 41 Sert, "The Human Scale in City Planning".
- 42 Wiener, "Diagram of the human environment"
- 43 See Hyde T., Planos, Planes y planificación. in Mumford E., Sarkis H., Josep Lluís Sert: the Architect of Urban Design, 1953-1969. Yale University Press, 2008, p. 56-57
- 44 Josep Lluís Sert, "Centres on Community Life", 3
- 45 Enzo Paci, "Il cuore della città," vii
- 46 *Ibid.*
- 47 Canguilhem, "Le vivant et son milieu"
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- 49 Domhardt, "From the "Functional City" to the "Heart of the City". Green Space and Public Space in the CIAM Debates of 1942-1952", 133
- 50 Mumford, Eric. "The origins and evolution of Urban Design in the Breakup of CIAM", 10
- 51 Welter, "From locus genii to heart of the city: embracing the spirit of the city", 36
- 52 Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, 215
- 53 Le Corbusier, *Conversation at CIAM 8*, 39  
Viganò, *La città elementare*, 87
- 54 "CIAM failed and with it Team 10, not because of their formalistic or conflicted ideological projections but rather because there was ultimately no ground left upon which to continue any kind of rational discourse." Frampton, "Foreword", xv
- 55 Alexander, *The Heart of the City. The Necessary Binding Force That Creates The Core Of Every City*, 3
- 56 *Ibid.*

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# MAPPING THE NEIGHBORHOOD: LISBOA, LUANDA, MACAU

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Between the 1960s and 1980s, in cities founded in a Portuguese historical context, such as Luanda, Lisbon, and Macao emerged a number of residential complexes that had a shared matrix: privately developed high-rise buildings aimed at the middle class and located on the periphery. The three cities had different urban histories, even if they were united by the common denominator of being under Portuguese political and administrative control. Lisbon was a European capital made up of successive strata and occupation phases with ancient and mediaeval predecessors. Luanda was an old outpost on the west coast of Southern Africa that gradually took on the status of main city in Angola in the course of the 19th century, and in 1960, was undergoing a process of rapid population growth and expanding through its many areas of informal occupation. Lastly, Macao, an Asian city within the confines of a peninsula and the boundaries that separated it from continental China, was in a process of self-renewal and permanent reutilization of the space, with the urban transformation processes characterized by a speed that set it apart from the conventional European city. In this context of diverse backgrounds and conditions, an analysis of these residential complexes takes on particular importance, by applying residential models with a common urban, architectural and social matrix. This paper stems from a wider research project entitled "Homes for the biggest number: Lisbon, Luanda, Macao", funded by Fundação para a Ciência e Tecnologia (2013 – 2015) PTDC/ATP-AQ1/3707/2012 and its main intent is to analyze the residential models applied in the construction of the peripheries of cities with a Portuguese background from the 1960s onwards, and its current state in an historical and patrimonial perspectives.

## Keywords

middle-class housing, post-colonial studies, Portuguese architecture



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# REASSESSING THE DISCOURSE ON NEIGHBORHOOD DURING WWII: THE CONTRIBUTION OF AMERICAN ARCHITECTS

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Between the 1950s and the 1960s the concept of 'neighborhood' became a crucial and recurring reference for Italian planning by deeply influencing its discourses and practices. However, its use in multiple declinations and versions, brings to the light a partial understanding of the original aims and context that originated this concept. This abstract focuses on the role the American architectural culture had on the process of re-definition of this spatial model, deeply rooted in the legacy of the British lesson, filtered through the contribution of Clarence Perry during the 1920s, and strongly marked by the encounter with the New York settlement movement. It will observe some of the most relevant moments and places of the elaboration and circulation of the urban vision during WWII, that took shape through the specialized press, exhibitions, professional culture, and also mirrored by the first large-scale public housing programs and projects inaugurated in the United States after 1945. Documenting a quite unexplored moment of the discourse on neighborhood and community planning (that at the beginning of the 1940s anticipated some of the most relevant experiences inaugurated in Europe and Italy during the following decade), this abstract highlights the multiple ways of the dissemination of the concept and of its codification, interpretation, hybridization and forms of resistance at local level, through the discourses and the practices of Italian planning.

**Keywords**

Neighborhood design, WWII, American architecture



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# THE FISHEYE MAP AS A WAY TO SOLVE THE “DISCONTINUOUS CONTINUITY” OF URBAN PROJECT: ITS USE FOR SENDAI PROJECT BY YOSHIZAKA TAKAMASA

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The 2011 Earthquake (in XXX), forced architects to think about the small and large scale, and relations between local communities and national bodies(?). Sendai was the foreground’s capital region during this disaster. The city since a long time was thinking about this correlations. In the 1970s, a committee called the “Sendai Developer Committee” was created to bring together local administrators, central government employees, individuals from the financial sector and academics. This committee decided to map-out a big concept for Sendai, called “The Ideal Form of Sendai, The City of trees: a proposal for Its Future.” To carry this out, Yoshihiko Sasaki and Yoshizaka Takamasa (professor of architecture in Waseda University, Tokyo) collaborated to create a common image. They started to compile data from local government and inhabitants. In the final report, they made guidelines for the entire region toward promoting the image of “the city of tree”. While this project and process is widely documented, this paper focuses specifically on the kind of representation used for the final document. This project also recorded the change of scale in Yoshizaka Takamasa’s thinking. After being educated by Kon Wajirô in Waseda University, he went on to work with Le Corbusier in France. He developed production and thinking at the cross of European modernity and buddhism. His drawings are part of the method and philosophy of “discontinuous continuity.” Furthermore, he developed the theory of DISCONT that he applied to his architectural and urban production. How fisheye representations used in Sendai project are one response to the inherent discontinuity of urban project, especially in the context of resilience? A large panel of illustrations can be found in the final report of the project from diagrams at the scale of Sendai’s region, to very detailed urban situations. Those diagrams and drawings reveal a specific process and thinking in urban planning. The fisheye map is a specific distortion of the map that combined three different map scales: community, city, and landscape. The renewal of the traditional map encourages new and more resilient thinking, especially with connections between locals and city government. This analysis should be related to the specificity of previous town planning in Sendai area. Thereby, it is specific situation in Miyagi prefecture, close to the sea and mountains. The various representations of the project are building this image of a great connection between Sendai city and nature. Through the analysis of this project, the beginning of machizukuri practice (bottom-up thinking in Japanese urban design that became popular in 1990s) can be recognized by the creation of some “platform”, space, and time dedicated to discussions between a various type of actors. This platform is the place for collaboration between universities, locals, and local government. Such kind of “platform” allows the recognition of the local resources and the importance of the relationship between cities shapes and landscapes. Fisheye maps are still used as images for reconstruction process and recovery management.

## **Keywords**

Regional planning, Tohoku reconstruction, Yoshizaka Takamasa, Fisheye map, Community participation





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# THE UNIQUE CASE OF SQUATTER PREVENTION PROJECTS IN TURKEY: TOZKOPARAN NEIGHBORHOOD

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Istanbul is a metropolitan city that owes its present form to many harsh city planning decisions made in the 1950s. Rapid urbanization and internal immigration created an urgent need for housing, resulting in uncontrolled, unplanned urban growth. Public authorities, constrained by inertia, offered only limited solutions to the problem of sheltering the urban poor: Instead, public investment was used for the construction of new highways and housing for the middle and upper-middle classes. Old neighbourhoods in the historical center of the city were torn apart in order to accommodate a new, automobile-based lifestyle, while many former residents of the city were evicted and relocated. Tozkoparan neighborhood was the first example of “Squatter Prevention Projects”: it was an exception, as a public housing project intended to shelter those evicted from their houses or incapable of dwelling in their former homes. A limited number of Squatter Prevention Projects were put into place across Turkey after being made possible by the Squatter Act of 1966. Yet, with shifting urban politics from the 1980s onwards, these projects became the target of a new urban renewal discourse which would result in a radical transformation of the neighborhoods they were based in. Our paper offers a short overview of the last 40 years with the aim of highlighting the emerging issue of neoliberal policies being used against the urban poor.

## Keywords

mass migration, housing for the urban poor, resilience, Istanbul, urban politics

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## INTRODUCTION

An investigation of the changing politics of housing in Turkey shows that state organizations were late in their attempts to deal with internal immigration and the unplanned expansion of illegal neighborhoods.<sup>1</sup> From the mid-1950s on, immigration provided essential labor power for a growing Istanbul, yet the housing policies put in place were insufficient for managing the increase in urban population.<sup>2</sup> Even though public housing was very much on the agenda, the housing projects implemented for the urban poor remained far outnumbered by illegal neighborhoods, especially in Istanbul. In the 1970s the *gecekondu* (the Turkish for “built at night”, used for slums) phenomenon was a part of the populist discourses of political parties and a resource for early ideas of evolutionary architecture. But following the military coup of 1980, new governments no longer expected to find solutions to illegal housing and the uncontrolled expansion of the city in urban planning; instead, they decided to legalize all of the illegal buildings that met certain conditions.<sup>3</sup>

In this paper, the particular story of modernization and the built environment in Turkey is investigated through the unique case of Squatter Prevention Projects (SPPs), and we aim to highlight two different aspects of social engineering in the context of social housing: firstly, the top-down attempt to create an ideal environment for an ideal citizen, and secondly, using the discipline of urban planning to help those in urgent need of healthy housing. From the 1980s, the transformation of economic politics and the new consumption patterns of post-industrial society changed the appearance of social housing in different discourses.

After World War II, the architectural profession was discredited for not fulfilling its promises and achieving an industrial utopia.<sup>4</sup> The narrative of architectural history has also been reconstituted after the massive construction programs of the post-World War II years.<sup>5</sup> Architectural practice committed itself to a vanguard position in achieving a utopian industrial society, and was later criticised for losing its critical positioning in social matters.<sup>6</sup> Through the reevaluation of an example of social architecture—in this case the Tozkoparan Squatter Prevention Project, the first example of a SPP put into practice—and exposing local dynamics through a historiographical approach, we can point out an important moment of urban history, in which professionals prioritized the urgent needs of society. The housing politics of the 1960s and 1970s were considered steps towards a welfare society,<sup>7</sup> but the dream of a welfare society did not come to fruition. Accordingly, Tozkoparan and other neighborhoods resisting transformation are important and represent the time in the past, when there was a belief in that unfulfilled dream.

This paper, adopting a mixed methodology, depicts the Act of 1966 and the Tozkoparan Project, offering a short overview of the last 40 years of the neighborhood and dealing with the emerging issue of neoliberal policies that disadvantage the urban poor. Spatial interventions carried out by inhabitants themselves throughout this period are also considered as an important aspect of the overview. Many of the developments are also examined to show the qualities lacking in the planning of the project.

The outcomes of this research are provisional. However, this paper aims at contributing to a broader understanding of social housing for the poor in Turkey and in general.



FIGURE 1 Tozkoparan Squatter Prevention Area



FIGURE 2 Location of industrial areas, illegal neighborhoods and SPPs in Istanbul between 1960-1980

## THE HISTORICAL CONTEXT

The roots of the fast and complex evolution of Istanbul are to be found in the socio-economic transformation which occurred in the second half of the 20<sup>th</sup> Century.<sup>8</sup> This time period saw a transition from import-substitution policies to a liberal approach prevailing on the socio-economic scene. Although the housing politics of the 1960s and 1970s were not as effective as intended, they were actions that represented steps towards a welfare society.<sup>9</sup> In 1950, the Democratic Party (DP) won both the general and municipal elections. Before 1950, the DP's election argument was based on democracy and liberalism<sup>10</sup> and the discourse supported the construction of populist urban politics, redirecting long-lost attention back to the neglected metropolis of Istanbul.<sup>11</sup> This decade also witnessed a loss of "not only its [Istanbul's] ethnic diversity, but its traditional largely non-Muslim merchant and industrial classes".<sup>12</sup> These populations were replaced by a wave of Muslim immigrants from Anatolia, and this shift had serious effects on both urban culture and populist politics.<sup>13</sup> Concurrently, urbanization issues began to dominate the political discourse.<sup>14</sup> Rapid industrialization in this period increased the demand for housing, private transport encouraged further sprawl, the appropriation of the old city center affected the everyday lives of its inhabitants, and forced evictions resulted in extensive housing problems, and yet state institutions could not afford a real solution.<sup>15</sup>

The military coup carried out on May 27, 1960 had serious reverberations on the fields of planning and architecture.<sup>16</sup> The period was dominated by the ideal of economic progress based on self-sufficient national industry. The theme of reconstruction<sup>17</sup> also became one of the important topics of architectural debate.<sup>18</sup> Yet neither during the DP government, nor after the military coup, did these idealistic pursuits realize their intended outcomes.<sup>19</sup>

## HOUSING POLITICS AND SOCIAL HOUSING IN TURKEY<sup>20</sup>

Shortly before the 1980 coup d'état, the housing issue became an instrument of political struggle and discussions on housing were transformed into multi-sided exchanges of views and public debates.<sup>21</sup> Early attempts at constructing public housing neither met the needs of those in urgent need of housing nor were accessible to them, leading to harsh criticisms of the early projects.<sup>22</sup> In this period, housing issues became heavily politicized, and housing questions became a crucial component of class struggle.<sup>23</sup>

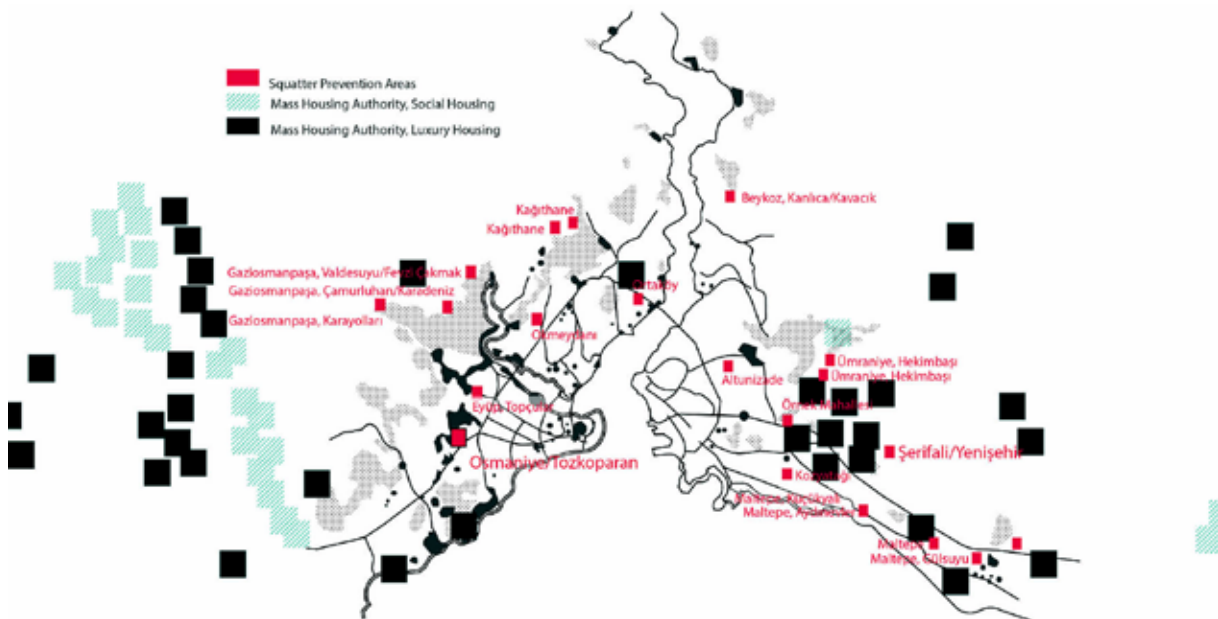


FIGURE 3 Locations of SPPs built by the Ministry of Reconstruction and Resettlement in relation to social housing and luxury housing built in Istanbul by the Mass Housing Authority from the 1980s onwards.

In Istanbul, the inability of the state to provide housing led to a growing self-regulated construction and housing market.<sup>24</sup> At the beginning of the 1960s, however, came a shift of the responsibility for housing from local to central government. In 1958, *Hürriyet* daily newspaper covered the detection and demolition of squatter houses around the Florya and Mecidiyeköy neighborhoods located on the edges of the city.<sup>25</sup> The article mentioned new apartment blocks to be built around Kazlıçeşme (which is also located outside of the city walls, near to neighboring industrial facilities) for the *gecekondu* settlers. Another newspaper in 1962 indicated that local authorities might start construction on the empty municipal land (*Milliyet*, 1962). The Real Estate and Credit Bank had given housing loans to cooperatives in preceding decades, but by the second half of the century, both the Bank and the cooperative system were accused of not having provided a real solution for the underprivileged, and for using their resources to construct luxury dwellings.<sup>26</sup>

A critical threshold was the new *Gecekondu* (Squatter) Act (No. 775), passed in 1966, which authorized the state to provide shelter directly. The Squatter Act of 1966 was a legislative and also a cultural threshold, being the first law to include the word *gecekondu*. The aim of this act was the “rehabilitation and clearance of existing squatters and the prevention of further illegal constructions”. Mass housing was proposed as a solution for the first time in the second Five-Year Development Plan for the period 1968-1972.<sup>27</sup> In 53 neighborhoods, Squatter Prevention Projects were designed for the prohibition and removal of illegal construction between 1966-1980.<sup>28</sup>

Throughout the 1960s, industrial facilities outside the city centre, on the coasts of the Golden Horn and on the periphery of the historical peninsula were surrounded by illegal settlements. Squatter areas were mentioned in the newspapers, accompanied by images of their demolition.<sup>29</sup> In the early period, when state institutions first proposed prevention projects as a valid solution to the housing problem, the areas the project would encompass were chosen in accordance with the logic of illegal settlements. Yet, in the 2000s, and particularly after 2007, when the Mass Housing Authority acquired all the authority and responsibilities granted to the Ministry of Reconstruction and Resettlement by the *Gecekondu* Act, the squatter prevention areas were targeted by governmental institutions as areas for renewal. The redefinition of this land from areas for social housing to areas for urban renewal is indicative of the changing politics of housing in Turkey.

## TOZKOPARAN, A CASE STUDY

Tozkoparan is located on the European side of Istanbul, to the north of the E-5 highway, which connects the city centre to the west.<sup>30</sup> The so-called Reconstruction and Resettlement Blocks in Tozkoparan consist of standard types developed by the housing agency of the central government. The first blocks in the Tozkoparan neighborhood were those built in order to house people who lost their homes due to demolitions on the historical peninsula.<sup>31</sup> The land for the Tozkoparan SPP was expropriated by the Ministry of Reconstruction and Resettlement in 1962. Research from 1977 stated that 26% of the land taken over already belonged to the public, and official parliamentary reports show that infrastructure works, such as roads, the sewerage system, water and electricity were continuing in 1965.<sup>32</sup> The construction of 6,000 housing units were planned, yet as of the year of study, only 2,914 units had been completed.<sup>33</sup>

The partially realized project of 1973 had many qualities in common with contemporary housing projects. It consisted of low-rise blocks in which small repeated units were positioned freely. Spaces in central locations were reserved for public uses, such as education, sports, culture and shopping. Four variations of apartment blocks and the nuclear single-family houses appeared as different housing types. The smallest units, of around 30-35 square meters, were in the A-blocks, which had a courtyard. The rationalistic general layout of the project was developed around a main axis in the north-south direction. The main centre consisted of small shops. Apart from the schools, there were two neighborhood parks and plentiful empty in-between spaces. These planning principles clearly corresponded with modernist planning in terms of functional zoning and the usage of green belts for isolation. Yet the project also reflects important negative criticisms pointed at post-World War II modernism: the lack of reference to topographical and climatic conditions, geographical variations, or any reflection of the area's cultural heritage.

When we look at the project commission processes within the Ministry,<sup>34</sup> we find a repetition of the same typology. The most effective state mechanism for housing production reflected principles such as efficiency and functionalism. Still, the block designs were deprived of topographical, climatic and cultural inputs, mainly because the provincial organizations responsible for local adaptations were not effective enough. A further reason for negative impressions on the public was the lack of maintenance in the long term. Architect Melih Karaaslan,<sup>35</sup> who was the editor of *Mimarlık* (Architecture) magazine between 1985-1994, stated that this process facilitated the legitimization of an image of architecture as incapable of producing buildings appropriate to the conditions of the country.

The buildings in Tozkoparan, which were erected using traditional construction methods, benefited in a limited sense from the potential of the concrete frame structural system, which allowed the possibility of a free-facade organization. Narrow, cantilevered balconies amounted to only a small proportion of the entire facade in terms of width, leading to less flexibility and limiting the possibilities of intervention. Academic studies, news reports and interviews carried out with the inhabitants show the absence of many elements of a housing environment when the first settlers arrived. Although the apartment blocks were complete, the open spaces were neglected and many infrastructural elements were missing. Crucial missing requirements included storage bunkers specifically for coal or vegetation, a preschool, a study centre, a library for the younger population, and sports facilities. These oversights by the municipality, which was responsible for common spaces, led the inhabitants to initiate individual or group interventions and reproduce these public spaces. These acts had both positive and negative outcomes on the present-day situation. The strong community and solidarity within the community is based on its past deficiencies. Yet, many of the physical alterations—specifically the unit-based interventions—have led to a feeling that the structural system is insecure.<sup>36</sup> Interventions by residents appear at various scales. There are many transformations at the unit scale, such as incorporating balcony spaces within the apartments, changing the plan or facade organization, making extensions, etc. Also, we have evidence of many common spaces in and between the blocks being created. The earliest proof of space-making is on the news of 1967, which reports that inhabitants were building coal storage bunkers with found materials.<sup>37</sup> Recent interviews have shown that the majority of

dwellers in an A-type apartment block decided to block the open entrance to the courtyard and started to use the space for mutual gatherings, celebrations, weddings and birthdays (Interview 1, 2014). The staircases and open corridors were also used by the neighbors jointly as living and storage spaces. Consequently, the popular use of common spaces created unexpected encounters and strong bonds after many years.<sup>38</sup> In any transformation, the neighbors were forced to tolerate one another. Yet many others became part of the everyday life of the blocks. Entertaining guests together was seen as a positive outcome resulting from an initial negative condition: the inadequate size of units. However, the urban renewal process after 2008 interrupted the organic transformation of the space. The owners of the rental apartments are concerned about the future of their buildings and are not enthusiastic about investing in them.<sup>39</sup>

Tozkoparan was declared as an urban renewal area in 2008. The risk of an earthquake was the underlying reason given for the decision.<sup>40</sup> The neighbourhood organization and residents of the area have been taking legal action against the urban renewal process from 2008 to the present day. They demand a transparent, inclusive process. Yet the dwellers and their lawyers seem to be on a different side of the operation to different municipal and governmental bureaucrats, officials and big construction firms providing services including all of the architecture, planning, landscape and infrastructural design and construction. Instead of state institutions preparing and implementing top-down projects and introducing these projects to the existing urban texture, recent socio-economic conditions have rendered the private sector responsible for new proposals.

## CONCLUDING REMARKS

The commodification of housing in the post-industrial, global world economy has largely replaced the belief in a welfare society achievable through the tools of urban planning and architecture. However, the history of this transition of the urban environment occurred on many different levels which are rarely touched upon, such as through major political decisions, socio-economic changes, urban transformation, public investments, maintenance issues and building scale.

In this narrative of local modernity in Turkey, the urban professionals of the 1960s who contributed to the creation of social projects are acknowledged as social engineers within the modernization project of a developing country. Yet, with the economic and cultural shift of the 1980s, the socialist position that lay behind this project was abandoned. With the aim of highlighting how the discipline of city planning and architecture abandoned its tradition of social engagement, this study has focused on the investigation of the outcomes of early housing politics and how the built environment has been transformed by them. After an analysis of a critical 50-year period in the history of urban planning, the question that this research asks is whether urban planning professionals need to take a second look at the bottom-up transformation of the top-down planned space and start learning from the failures of the discipline, without mystifying them, in order to contribute to a better physical environment.

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## Endnotes

- 1 This paper is an outcome of an ongoing doctoral study at ITU. We are grateful for ?hsan Bilgin and Arda ?nceo?lu's contributions during the writing process.
- 2 Government institutions in Turkey were only able to intervene in the housing problem from the 1950s onwards, when economic conditions finally began to synchronize with the world market. (?hsan Bilgin, *Bedelsiz Modernleşme* (2002 [1999])).
- 3 As a consequence, a mass of illegally-built and unplanned housing became part of the housing market (Şükrü Aslan and Tahire Erman, *The Transformation of the Urban Periphery: Once Upon a Time There Were Gecekondu in Istanbul* (Cambridge, 2012) 106.).
- 4 It became integrated with capitalist development to its full extent and contributed to the emergence and proliferation of new types of spaces such as shopping malls, condominiums, gated communities, and iconic cultural buildings. Susan Buck-Mors mentioned the ruins of the modern city "evoke a nostalgia (...) for the belief that such a utopia is possible at all" (1995, 9). According to Hilde Heynen (2000, 19-23, 11), there are many different modernisms in architecture, embracing or rejecting the characteristics of modernity, and the main dilemma of architecture has been the dependence of the practice on the tools of capitalist development.
- 5 The built environment associated with modernism was criticized for its over-fascination with new mass-society culture and with industrial development. (Sarah Williams Goldhagen and Réjean Legault, *Anxious Modernisms: Experimentation in Postwar Architectural Culture* (Massachusetts, 2000) 11.)
- 6 Ibid, 12.
- 7 Bozdoğan and Akcan, *Turkey: Modern Architectures in History*, 141.
- 8 Basic components of this urban transformation were fast industrialization, internal immigration, the expansion of the city to the east and west, unsystematic urban interventions, the adaptation of the old street network to automobiles, demolitions and forced evictions, and increasing demand for housing. Moreover, the inertia of the state mechanisms in creating a housing solution, a self-regulated urbanism, the development of new middle/upper-middle class neighborhoods and a shift of the central business district to the edges of mid-century Istanbul, the spread of *dolmuş* (a self-regulated form of public transportation), a subdivision of agricultural land and residential plots etc. can be added to these basic components.
- 9 Bozdoğan and Akcan, *Turkey: Modern Architectures in History*, 141.
- 10 Ahmet Makal, *Türkiye'de çok partili dönemde çal?şma ilişkileri: 1946-1963* (?mge, 2002)
- 11 Joseph Szyliowicz explains the tension in society as follows: the Republican People's Party (*Cumhuriyet Halk Partisi*, CHP) government's harsh decisions and the economic struggle during the World War II contributed to the increase in the opposition party's shares of the votes. (Joseph S. Szyliowicz, "The political dynamics of rural Turkey," *Middle East Journal* 16, no. 4 (1962): 437-438.)
- 12 Although Istanbul was not officially a part of population exchange agreements between Greece and Turkey, the city lost many of its Greek-Orthodox inhabitants, along with many other ethnic groups, such as Armenians and Jews (Alan Duben. "Which Istanbul? Whose Past? Whose Future?," *South European Society and Politics* 17, no. 4 (2012): 593.).
- 13 ?pek Akpınar, "Urbanization represented in the historical peninsula: Turkification of Istanbul in the 1950s", in *Mid-Century Modernism in Turkey, Architecture across Cultures in the 1950s and 1960s*, edited by Meltem Ö. Gürel, New York: Routledge, 2015: 56-84.
- 14 In 1956 Prime Minister Menderes declared that the government would continue to pursue plans for Istanbul's redevelopment despite economic difficulties. The Menderes government proposed a new, automobile-oriented urbanism for Istanbul.
- 15 *Ça?lar Keyder*, "Enformel Konut Piyasas?ndan Küresel Konut Piyasas?na" in *Istanbul: Küresel ile Yerel Aras?nda*, ed. *Ça?lar Keyder* (Istanbul: Metis Yay?nlar?, 2009 [2000])
- 16 Urban planning professionals in government institutions saw their influence on urban spaces increase and these professionals adopted a more socialist perspective in parallel to state organizations (Ekinci, 1994; Tekeli, 1992; Batuman, 2011).
- 17 ?pek Akpınar, "The Rebuilding of Istanbul after the Plan of Henri Prost, 1937-1960: from secularisation to Turkish modernisation," (PhD diss., Bartlett School of Graduate Studies, University College London, 2003).; Bozdoğan and Akcan, *Turkey: Modern Architectures in History*, 173.
- 18 Another important issue was the role of the architect. Architects and planners who criticised the existing system, on the one hand cooperated with state bodies, and on the other, participated or worked as jury members in architectural competitions for public buildings (Bozdoğan, and Akcan, 2012; Tekeli, 2003),.
- 19 This inactivity was caused by the lack of economic and political stabilization, and by clashes between the mostly social-democratic local governments and the conservative central government. (?lhan Tekeli. *Belediyeçilik yaz?lar?*, (1976-1991). IULA-EMME, 1992: 99).
- 20 For a recent discussion see Ipek Akpınar and Funda Uz, "chronology", in "Geç Olmadan Eve Dön", National Exhibition on Housing, *Vitra Ça?daş Mimarlık Dizisi* 5, 2016.
- 21 The arrangement of conventions and workshops, and gatherings at universities and professional organizations enabled different social groups to discuss the subject from many perspectives.
- 22 Such as Ataköy and Levent (which ended up as upper-middle class neighborhoods) that resulted in efforts to establish housing standards (Tekeli, 2010, 4).
- 23 Housing solutions should not arise from a top-down process, but from participatory practices learning from the *gecekondu* experience (Aslan, 2011; Batuman, 2006; Tekeli, 2010).
- 24 Since housing production was mainly conducted and controlled by the private sector, the state could place constraints on taxes and loans (T.C. Başbakanlık Devlet Planlama Teşkilatı, 1963, 433). In 1953, Law No. 6188 redefined and extended the area of jurisdiction for the municipalities.
- 25 "İstanbul'da gecekondu inşaat? yeniden arttı?", *Hürriyet Daily Newspaper*, October 11, 1987.
- 26 Zeki Sayar, "Mesken Davas?!", *Arkitekt*, 305(1961):151, Ruşen Y. Keleş, *Sosyal Konut Politikası? Kavram? Üzerinde Bir Deneme ve Türkiye de Sosyal Konut Politikası?*. Ankara Üniversitesi SBF Dergisi 21, no. 02 (1966):191.
- 27 T.C. Başbakanlık Devlet Planlama Teşkilatı Müsteşarlığı, 1968, 273.
- 28 Property ownership status and expropriation costs, the location and its relationship with the rest of the city, the accumulation of population, distance to areas of employment and connectivity in terms of public transportation were taken into consideration in the determination of the project areas. (Zekai Görgülü, *Istanbul Metropolitan Alan?nda Gecekondu Önleme Bölgelerinin Mekenasal Konumlar? ve Fizik Mekan Çözömleri*, (Yıldız Technical University: 1982) 117)



- 29 The area outside of the city walls, accommodating factories and workshops, was also surrounded with squatter neighborhoods. Zekai Görgülü's (1982, 176) studies show that in the period between the new legislation in 1966 and the year of study in 1982, the designated Squatter Prevention Areas were concentrated around Bakırköy, Eyüp, Gaziormanpaşa and Kağıthane on the European side of Istanbul; and Kartal, Maltepe and Üsküdar neighborhoods on the Asian side of the city.
- 30 For a recent reading see Şebnem Şoher, "Tozkoparan, Sosyal Konut", in "Chronology" edited by Ipek Akpınar and Funda Uz, "Geç Olmadan Eve Dön", National exhibition on Housing, in *Vitra Çağdaş Mimarlık Dizisi 5*, 2016.
- 31 Binnur Öktem Ünsal and Asuman Türkün, "Tozkoparan: Bir Sosyal Mesken Alanının Tasfiyesi," in *Mülk, Mahal, İnsan: İstanbul'da Kentsel Dönüşüm*, ed. Asuman Türkün (Istanbul: Bilgi Yayınları, 2014), 315.
- 32 *Cumhuriyet Senatosu Tutanak Dergisi*, (Ankara, 1965), 106.
- 33 Orhan Tuna, *Istanbul Gecekondu Önleme Bölgeleri Araştırması*, (Istanbul: Bilmen Basımevi), 31.
- 34 Gülay Andaç, "Bayındırlık ve İskân Bakanlığının proje elde etmek yöntemleri ve organizasyonu." *Mimarlık Dergisi*, 224 no.3 (1987):39-46.
- 35 Melih Karaarslan, "Bayındırlık ve İskân Bakanlığının ve Mimarlığının." *Mimarlık Dergisi*, 224, no.3 (1987):32.
- 36 Interview 1, 2014; Interview 3, 2015
- 37 "Sosyal Meskenlerde Gecekondu", *Milliyet Daily Newspaper*, August 13, 1967.
- 38 Interview 1-2, 2014.
- 39 Interview 3, 2015.
- 40 "TOK? Güngören'in çehresini deştirecek", *Mimdap*, Accessed June 12, 2014, <http://www.mimdap.org/?p=5231>.



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# Resilient Housing

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Chair: *Laura Kolbe*



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# THE CULTURE OF PROPERTY: HISTORICIZING SPAIN'S OWNERSHIP SOCIETY

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**Sophie Gonick**

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Over the course of the Spanish economic crisis, hundreds of thousands of households have lost their homes to foreclosure. In both popular accounts and academic work, this recent, devastating spate of evictions often appears to be a result of exuberant urbanization and the proliferation of novel and risky forms of credit. Yet when read against the longer backdrop of 20th century planning, we can locate this moment within a deliberate spatial history that brings together earlier considerations of autarkic self-reliance under Franco with more recent aspirations of European integration and identity.

Looking first to property's role in Madrid under the Franco regime, I demonstrate the various threads that led to private property's dominant role in Spanish culture. While contemporary accounts of Spanish housing policy often signal the ideological considerations that prompted the dictator's enthusiasm for this model, I here illustrate it must be placed within a broader political economy of economic self-reliance. Indeed, I argue that throughout various moments in recent history, property has been treated as a social, economic, and cultural tool that would facilitate integration into a very deliberate political whole for both Spain and in the greater European landscape. When I use this term integration, I am invoking its dual meaning, perhaps provocatively, of the integration of certain social groups into the general polity, and the greater project of European integration, in which housing, speculation, and the capitalization of urban land played a decisive role. Further, this duality allows us to understand how the spread of homeownership was a deliberate strategy that joined together both visions of social harmony and prosperous domestic economies with the larger aspiration of flamboyant city building for a European audience. Finally, I argue that while homeownership was often an ideological project, linked to certain social processes of transformation, the Spanish private property regime has always functioned as a de-facto urban economic development policy.

Drawing upon an array of archival materials, I look to private property and real estate to reveal how Madrid's urbanization, even when cloaked in the mantle of Catholic autarky and then democratic social justice, has always operated under through the logic of economic expansion and exploitation. This expansion operated through household economies and regional industrial development, domestic bank balances and municipal treasure chests. First, I explore the development of Spanish and madrileño concepts of homeownership during the Franco regime to demonstrate how the state used it as a tool for both human development and economic growth. Then, I explore the creation of Madrid's robust real estate market under democracy to show how the state privileged private urban investment as a means of both generating wealth and furthering the identity project of Europeanization. In addition to deepening understandings of the private property model in Spain, this presentation will reveal how the recent, disastrous spread of mortgage credit among immigrants and the working class is not a break, but rather concomitant with much longer historical trends.

## **Keywords**

Homeownership, Housing Policy, Madrid, Europeanization



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# HOW TO UNDERSTAND THE HISTORY OF HOUSING PLANNING IN MODERN SERBIA TO ACHIEVE NEW QUALITY IN HOUSING?

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*University of Belgrade*

The topic of (post)socialist housing has been in the spotlight of European science for years. It has usually been examined in relation to specific social and economic aspects, such as tenant rights, social affordability or the issue of rents. Furthermore, it has been interpreted through the lenses of functional and physical aspects, close to urban planning. Nevertheless, scientific research traditionally makes a clear distinction between (post)socialist housing and its “counterpart” in Western Europe, regardless of the aforementioned aspects. However, this “dichotomy” has not been clear-cut in all parts of Europe. The space of former Yugoslavia is a good example of this ascertainment. Centrally positioned, Serbia has had a particularly interesting history of housing planning. Both western/capitalist and eastern/socialist influences have blended in Serbian housing since the beginning of modern age, in early 20<sup>th</sup> century. The former Oriental matrix of housing has gradually transformed into a specific urban construct through mixed influences. It began with early capitalist progress, which formed both the first modern housing and the informal housing in interwar period. The second period was very interesting because of a unique socialist model in housing with numerous western influences. The last period, i.e. post-socialist transformation, has brought some remnants from the past; visible informality has been developed side by side with new market-oriented housing models, causing observable housing segregation. This situation has created a new distinctiveness of Serbian housing. The purpose of this research is to understand these planning patterns of housing in Serbia, aiming to give recommendations and guidelines for a more resistant and proactive housing planning. This aim will be achieved through the critical presentation of the mentioned three periods. Significant effort will be put into headlining the distinctiveness of the planning of Serbian housing, which can be a crucial element for its qualitative transformation.

## **Keywords**

Housing, urban planning, (post)socialism, transition, Serbia

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## INTRODUCTION

The topic of (post)socialist housing in Eastern and Central Europe has been in the spotlight of European science for years. Despite the fact that countries in this part of Europe have had distinctly different recent “post-socialist” history, they are regarded and studied as an entity in many cases. This is relevant even in case of major international organizations. It seems that these countries still have common characteristics, such as transitional difficulties in economy or ageing and declining population<sup>1</sup>, which is the reason they are examined in this manner. Thus, they are usually positioned as a contrast to housing in Western Europe, which has never had “socialist-state” element in its development.

However, the mentioned “dichotomy” has not been very strict in all parts of Europe. Located between the west, the east and the south, Serbia has always had elements of “hybrid” society. This location at the so-called “World crossroads” has brought the mixture of influences from Oriental heritage, socialist movements and constant impulses of Europeanization from the west. Regardless of whether these influences have been perceived as positive or negative, they have consequently formed the unique character of present-day Serbia<sup>2</sup>.

This uniqueness has been reflected through all aspects of the society. In this matter, housing in Serbia is not an exception, because “(a) housing unit does not exist in isolation from its physical and social environment”<sup>3</sup>. It also has common characteristics with housing in other countries in South-eastern Europe, which is usually considered as a distinct region in this issue<sup>4</sup>. Nevertheless, some specific features have been recognized in the case of Serbia. These features have clear roots in the complex past of the country and the related process of housing planning during the 20<sup>th</sup> century. Generally, the history of housing planning in Serbia is divided in three major periods, in accordance to the well-known periods in both European and Serbian national history during the 20<sup>th</sup> century.

This research strives to clarify these relations between present characteristics of Serbian housing and housing planning during the 20<sup>th</sup> century. It is organized so as to present the three mentioned historic periods. The essence in presenting every period is to critically explain the main patterns of housing and related planning. It is expected for the study to enable headlining the distinctiveness of the planning of Serbian housing. Consequently, the research will lead to the final stage - giving recommendations and guidelines for a more resistant and proactive housing planning in Serbia.

## THE FIRST PERIOD - SERBIA DURING INTERBELLUM

The space of current Serbia was unified for the first time and included in the newly-created Kingdom of Serbs, Croats and Slovenes, later named *Yugoslavia*, after the First World War, in 1918. It was formed from the former Kingdom of Serbia and the southern parts of the Hapsburg Empire<sup>5</sup>.

In aforementioned unified Serbia, there coexisted three regional “housing” traditions. In the northern, former Hapsburg part, the housing followed Hungarian/Pannonian type of well-planned and spacious settlements. It was characterised by multi-storey single-family housing units with ground floor retail facilities along block perimeter in compact city centres, as well as detached single-family housing units with rural/agricultural elements in the suburbs<sup>6</sup>. In contrast to this type of housing, which shows clear links between living and economics, the Ottoman type of housing, which existed in the southern Serbian towns, shows a strict functional differentiation. This type of housing was organised in monofunctional, ethnically differentiated and spontaneously developed residential areas with detached houses, known as “mahalas”, which encircled the central and very compact part of towns or “čaršija” with strictly non-residential functions (retail, crafts, government, etc.)<sup>7</sup>. The third type of housing was “transitive” - it was developed in the central parts of the Principality of Serbia during the 19<sup>th</sup> century, as a result of the young Serbian elite strive to westernise the former Ottoman urban elements. Hence, this type of housing had elements of both the first and the second types - housing was merged with retail in a very dense and partly spontaneous urban matrix<sup>8</sup>.





FIGURE 1 Old image of Čačak - "Transitive" type of urban fabric and housing



FIGURE 2 Pannonian type of housing with retail in the city centre of Sremska Mitrovica

Despite the identified typology, housing was generally traditional –all the inherited types of housing referred to single-family housing models in underdeveloped urban centres. Therefore, it can be observed as a common characteristic that modern housing patterns with further division and enrichment of housing models were developed in interwar period. This characteristic related to major cities, where the first mass-industrialisation and urbanisation occurred<sup>9</sup>. For instance, although the first examples of social and workers' housing already existed in Belgrade<sup>10</sup> and Subotica<sup>11</sup> (northern Serbia) before the First World War, the interwar period witnessed the intensification of the construction and the appearance of different models of this type of housing<sup>12</sup>.

The most intensive development of housing in the interwar period happened in Belgrade. Having become the capital of the newly-formed Yugoslavia, Belgrade transformed significantly in the following 23 years<sup>13</sup>. This was followed with the adoption of the new general urban plan of the city with very progressive albeit unachieved aims in 1924<sup>14</sup>. Furthermore, the passing of the new Construction Law in 1931 had a significant impact<sup>15</sup>. As a result, Belgrade became a huge construction-site after it had been seriously destroyed during the war.

This period was marked with the appearance of the first affluent housing areas in Belgrade. Some of them were centrally located. Multi-storey residential buildings with spacious apartments were built there, adding a new urban character to the city. Other locations around the centre were transformed into new residential areas with huge plots and villas. Their development was characterised by the application of the elements of garden-city movement<sup>16</sup>.

Nevertheless, vibrant atmosphere in the new capital and other major cities was followed by numerous problems in the housing sector. Newly-emerged demographic boom caused the problem of housing deficiency, which consequently resulted in the rise of illegal housing and informal residential areas. Furthermore, some legal obstacles, such as the ban of cooperative ownership in multi-family residential buildings, prevented the resolution of the problem. Therefore, almost half of the Serbian urban population lived in illegal settlements before the Second World War<sup>17</sup>. These settlements were usually constructed of poor material and without basic amenities and services. Typical example was a transformed and reduced terraced house model with small apartments, known as *Partaja*<sup>18</sup>. As a result of active illegal construction, professional argumentation about the weaknesses of the general urban plan appeared very soon after its adoption. This proved the obsolescence of the adopted urban plan<sup>19</sup>.

Similar, but scaled down, patterns of housing development occurred in Novi Sad and Niš as these cities were the seats of "Serbian" provinces in Yugoslavia. As it was mentioned above, smaller cities and towns in Serbia were mostly in stagnation. Thus, the interwar housing in these cities and towns preserved most of the characteristics of previous epoch(s). Only limited transformations could be observed, which were more exceptions than a rule to the overall housing patterns.



FIGURE 3 Typical examples of low-income and upscale inter-war housing in central Belgrade, with the problem of poor maintenance in both cases today



FIGURE 4 Typical examples of low-income and upscale inter-war housing in central Belgrade, with the problem of poor maintenance in both cases today

## THE SECOND PERIOD – SOCIALIST SERBIA

Although Yugoslavia became just one in a number of new socialist countries in Eastern and Central Europe after the Second World War, it had a very different history during the following four decades<sup>20</sup>. After the expulsion of the Communist Party of Yugoslavia from the Stalin-controlled Communist Information Bureau in 1948, Yugoslavia took up a unique socialist model<sup>21</sup>. This model was officially inaugurated as a Workers' Self-Government, which enabled decentralisation at all levels. Furthermore, it introduced some elements of market economy and opened the country to the west<sup>22</sup>. This model was in total contrast to the remaining socialist countries, where state socialist elites controlled all aspects of life and strictly promoted planned economy<sup>23</sup>.

The specificity of self-government model reflected strongly on the housing in Yugoslavia, because housing was one of the main problems for the new socialist government. The reasons were obvious: the cities were severely damaged during the war; more than 75% of Yugoslavian population lived in overpopulated albeit underdeveloped rural areas<sup>24</sup>; the state promoted the equalization of the proletariat and the urban residents in accordance with the socialist ideology of mass-industrialisation<sup>25,26</sup>. As a result, state-assisted fast urbanisation happened in the decades to follow. K. Petovar even named it the “urbocentric policy”<sup>27</sup>. The main consequence of this rapid urbanisation was a huge pressure on housing in urban areas and major cities in particular.

As a result of the self-government model, the housing policy was decentralised in the 1960s, giving more independence to republic and local governments, which consequently “had power to turn down national prescriptions”<sup>28</sup>. For example, both of the mentioned government levels could enact their own norms and standards in housing construction<sup>29</sup>. Nevertheless, housing as well as other spheres of life in the socialist Yugoslavia were generally based on the socialist model comprising the so called apartments with tenant rights<sup>30</sup>. This model prevented complete decentralisation and allowed “covert” state control in housing<sup>31</sup>.

Furthermore, this model enabled the introduction of some elements of market economy in the housing sector. This was especially noticeable in the construction of multi-family housing units, where a quasi-market system was organised. In these cases the state-owned companies had to invest at least 4% of their net product to buy new apartments from state-owned construction companies<sup>32</sup>. Moreover, the banking system of former Yugoslavia firmly supported all kinds of housing construction by offering very affordable loans. In the last decades of socialist Yugoslavia, this “approach” was transformed into a powerful model of locally-based Housing Construction Solidarity Funds which played a role of well-established cooperatives in housing construction.



FIGURE 5 An example of more humane socialist multi-family housing estates in New Belgrade



FIGURE 6 Sharp division between “legal” and “illegal” neighbourhoods in eastern Belgrade

These funds were particularly significant in the socialist republic of Serbia<sup>33</sup>. In contrast, the entire system of housing provision and construction was much simpler in the other socialist countries, where strictly vertical state-provided housing was dominant.

Another case which witnessed the difference between Yugoslavia and other socialist countries was the case of planning and designing process of mass-housing estates. Multi-family housing was planned and developed under western influence. This meant the introduction of new paradigms in the 1970s and the 1980s, such as housing programming<sup>34</sup> and participatory planning in housing. Panel blocks, well-known in many socialist cities, were relatively rare in the case of Yugoslavian cities. Additionally, the design of such blocks was usually well-organised and unique for every block or several blocks. The example of New Belgrade as a major “urban” representative of socialist Yugoslavia was illustrative – many blocks were formed according to the plans and projects with unique designs<sup>35</sup>.

However, multi-family housing in mass-housing estates was not a prevalent model of housing in majority of the Yugoslavian cities and towns<sup>36</sup>. Single-family housing in the form of detached houses was dominant in most of the small and middle-size urban settlements. Some other residential forms, such as terraced houses, were very infrequent and linked with more developed regions (Slovenia, Vojvodina)<sup>37</sup>. Single-family housing was also supported by the state, through the system of aforementioned loans.

Although all the state levels in the socialist Yugoslavia paid much attention to the housing sector, housing construction in many towns and cities was not sufficient to satisfy the demographic needs. This was mostly noticeable in under-developed republics where fast urbanisation occurred (Serbia, Bosnia and Herzegovina, Macedonia). Hence, the illegal sector of housing construction flourished there<sup>38</sup>. Illegal residential settlements were usually built in the outer belts around the main cities<sup>39</sup>, disabling the formation of the well-planned and affluent suburbia, typical for the capitalist west. These settlements were characterised by a conflict between architectural and urban dimensions: despite the fact that the houses in illegal settlements were often very spacious and decently built, they were located on the land planned for other purposes and thereby excluded from the basic communal amenities and public services in spontaneously-developed and fuzzy urban fabric.

## THE THIRD PERIOD - POST-SOCIALIST SERBIA

Despite the fact that post-socialist transition is generalised by definition as a political and economic transformation of former socialist societies in Central and Eastern Europe<sup>40</sup>, overall progress in this transformation has varied among countries. Post-socialist transition has been slower in the sub-region of the Balkans or South Eastern Europe, due to political turmoil in the 1990s. Due to the Yugoslavian crisis, the transition in the countries of former Yugoslavia has been a particularly painful experience. It has posed specific challenges to urban planning and housing, such as the destruction of the built environment, post-war reconstruction, refugees, the changes of national borders, etc. Therefore, most of the newly-formed countries are marked as “long-term excluded” territories in the EU integration<sup>41</sup>. This isolation is still evident.

In the case of Serbia, this isolation has often been named a “blocked” transformation in the 1990s<sup>42</sup>. Taking the housing sector in account, it refers to the state of coexistence of the elements of both old and new systems, where the role of the state was largely marginalised<sup>43</sup>. Serbian legal system of housing in the 1990s was a good example of such a situation – it was very problematic and obsolete by many criteria. For example, the main Law on housing, enacted in 1992, enabled a quick mass-privatisation of state-owned apartments, but prevented restitution process at the same time<sup>44</sup>. Furthermore, it has not developed any mechanism which would substitute for the loss of former public housing. Finally, the implementation of the legal acts was very poor, which opened the doors to illegal practice in housing. Nevertheless, it has prevented some negative consequences of post-socialist transformation of residential areas, such as ghettoisation and urban fragmentation of housing<sup>45</sup>.

The practice of illegal housing in Serbian cities was very widespread during the 1990s. For example, illegal construction occupied almost 50% of the housing sector in Belgrade in the late 1990s<sup>46</sup>. It was especially accelerated by the influx of the refugee population, who represented more than 7% of the total population in Serbia during this time. Furthermore, some patterns of illegal housing changed during the 1990s. For the first time it appeared in the inner parts of urban areas and in the form of multi-story collective buildings for the market. The problem with illegal housing practice was particularly noticeable in Belgrade. As a result, 44% of residential areas in the urban area of Belgrade were labelled illegal by the new general urban plan in 2002<sup>47</sup>. Such a high percentage proved this issue to be a “result” of unofficial “housing policy” in harsh times with the consequences that cannot be ignored in any future housing policy or strategy<sup>48</sup>.

Although illegal housing has not been stopped after the political and economic opening of Serbia in 2000, it has decreased in numbers. The involvement of UN Habitat in Serbia has had an especially positive influence to the housing regulation, since housing component has been recognized by the entire urban development<sup>49</sup>. In this situation, most of the efforts have been made to recover the vulnerable cases such as Roma slums in Serbia, which are known as socially excluded urban spaces with a high level of informality<sup>50</sup>. Nevertheless, the regulation of this element in housing is still an inevitable task for Serbian experts and authorities – three legalisation acts passed in the last 15 years have not had major success.

The problem of illegal housing in the last two decades has certainly been connected to the evident shortage of public or social housing. Nowadays, more than 98% of housing units in Serbia are in private ownership, which is higher than in most other post-socialist countries<sup>51</sup>. Mass-privatisation of old housing facilities has not been followed by a measure to replace them with new forms of social/affordable housing. Even though qualitative new legislation on social housing was enacted several years ago, the concrete provision of new social/affordable housing has not been successful due to both financial and administrative problems<sup>52</sup>. For example, new social-housing buildings are still very rare in Serbian cities. Accordingly, inefficient state policy in housing has caused a huge gap between the need and the solutions in socially supporting housing measures.



FIGURE 7 Evident problem with the maximization of the capacities of built plot in central Belgrade



FIGURE 8 One of the rare examples of new social housing in Serbia, in Sremska Mitrovica

The aforementioned mass-privatisation has also caused some other obstacles in housing development. Many new flat owners have been too poor to maintain the newly-acquired private property, which has consequently led to visible problems of maintenance and management of the existing housing facilities<sup>53</sup>. Many multi-family housing buildings are currently in bad shape.

In contrast, this issue has caused the occurrence of one quite conflicting and unique phenomenon. Since living costs in non-maintained multi-family buildings are more affordable to a typical Serbian urban household, the price of this type of housing is significantly higher than the price of single-family detached houses with similar surface area. This has even been evident in small cities and towns in Serbia since 2000, where general urban patterns enable smaller densities. Market has reacted to this opportunity before the adequate controlling system has been established. Consequently, new multi-storey housing facilities are usually constructed on overbuilt plots with maximum utilization of the capacities, which altogether generates inhumane living conditions regarding natural lightening or ventilation.

The solution for the refurbishment of such existing multi-family buildings in Serbian cities is also unique. It refers to the addition of extra floor(s) above the top of existing buildings as a compensation for the refurbishment. But, weak legal and administrative systems in Serbia have influenced these extensions to be of ill-favoured design and on prominent positions in the urban space<sup>54</sup>.

Conclusion — Recommendations and Guidelines for Future Development Considering the elaboration of modern housing history of Serbia, it is easy to make a between some long-lasting patterns and new tendencies in this sector. This distinction can be a good starting point for the formulation of different approaches to the tasks of housing planning in Serbia:

First, the problem of illegal practice in Serbian housing has been obvious during the entire period. Even more, the illegal residential construction has boomed in the last period of post-socialist transformation, bringing into question the total urban development. Thus, coping with illegal housing is certainly the major task in spatial and urban planning. However, planning needs to overcome the old “conservative” approach and try to cleverly deal with it instead of disclaiming it. The worst option is to turn a blind eye to this widespread and persistent problem.

A similar long-lasting problem can be noticed in housing regulation. It seems that legal and planning acts in housing have been strict in relation to ownership and land utilization, but without adequate outcomes in reality. New market economy in Serbia is certainly a challenge, but examples of good practice in other post-socialist countries clarify that these acts can be flexible enough to enable a balance between regulations and profitability.

Other problems are related to the more recent history of Serbian housing. For example, the maximum utilization of all capacities in the construction of new housing facilities is not just a problem for legislation and formal planning but is also linked with individual preferences and knowledge. Therefore, the education of prospective owners of new housing facilities could be very useful. The popularisation of guidance books and best-practice brochures could accompany this practice.

The management and the maintenance of old housing facilities have also been a relevant factor in the recent history. Here, the task is to transform the current system into a new one which would produce self-regulation of the existing housing. For such an accomplishment the combined efforts of public and private sectors are inevitable. Planning should promote sustainable patterns and modes. One of the possible solutions is a shift of a part of these facilities from residential to other central functions, which are more market-orientated and hence more able to invest in maintenance. This can be a win-win combination since it will consequentially support new housing construction and vitality of the housing market.

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No potential conflict of interest was reported by the author.

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Figure 01: Photo-Archive of National museum of Čačak

Figure 02 to 05: Branislav Antić

Figure 06: Google Earth (accessed April 6, 2016)

Figure 07 to 08: Branislav Antić



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# TRAM-CARS, TENTS, "IGLOOS" AND GARAGES: AN INSTITUTIONAL- THEORETICAL LENS ON TEMPORARY DWELLINGS IN SYDNEY

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Following World War II, Australia was confronted by a severe shortage of dwellings. One relief valve for some cities was a stock of un-serviced building lots situated on the suburban fringe. In Sydney, Australia's largest city, thousands of aspiring home-owners purchased such allotments but, affected by shortages of money and materials, could only construct a temporary dwelling. These homes ranged from shacks and garages to tram-cars, ex-army Nissen-huts and tents. The post-war phenomenon of such housing in Australia has been neglected both empirically and theoretically. This paper draws upon Sorensen's suggestion of Historical Institutionalism in an attempt to pursue the theoretical challenge. The proposition explored is that the existence of temporary dwellings in Sydney was evidence of a critical juncture in the institutionalised regulation of housing, creating opportunities for policy change. Firstly, local authorities were forced to permit the occupation of dwellings which did not comply with existing ordinances, and secondly, they adapted their regulations to give permanent approval to sub-standard accommodation. The paper concludes by suggesting that these policy changes reverted to the institutionalised model for two reasons: path dependency and positive feedback mechanisms privileged those committed to an unchanged institution, while the permanent housing converged with adapted regulations.

## **Keywords**

temporary dwellings; Sydney; housing institution; critical juncture; path dependency

## **How to Cite**

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## INTRODUCTION

In September 1952, an amendment to Ordinance 71 of the Local Government Act, 1919 was passed by the legislature of the state of New South Wales in Australia. The new clause prohibited the use of temporary structures for residential purposes in the urban areas of all Shires and Municipalities in metropolitan Sydney.<sup>1</sup> This amendment was intended by its supporters to be the definitive action which made it impossible for aspiring homeowners on Sydney's suburban fringe to continue to build and occupy temporary dwellings.<sup>2</sup>

The extensive construction of temporary dwellings on the developing fringes of Sydney was an unforeseen response to the housing situation following World War II, where the cumulative effects of twenty years of economic depression and wartime restrictions had left Australia confronted by a severe shortage of dwellings, whether for lease or purchase.<sup>3</sup> Desperate for secure shelter, many low-income earners in Sydney took advantage of the eventual sale of thousands of prematurely-developed residential allotments which had been held by investors for up to sixty years, and bought land on the fringes of the metropolitan area but could not obtain or afford the materials and labour needed to realise a conventional house. Their solution was to build a temporary dwelling for themselves and their families while they worked to achieve their long-term goal of a permanent home.

The phenomenon of such temporary dwellings can be understood as a widespread response to a social need which was enabled by the prevailing economic and political context. A comprehensive interpretation therefore requires three interwoven analytic frameworks. In attempting such an interpretation, I have relied on psychologist Abraham Maslow's theory of human motivation, political-economist Giovanni Arrighi's theory of systemic cycles of accumulation, and urban geographer Andre Sorensen's recent suggestion of Historical Institutionalism.<sup>4</sup>

This paper focusses on the political environment and proposes that the emergence, existence and eventual exclusion of these dwellings can be understood through the theoretical lens of Historical Institutionalism, an analytic tool which can be used to interpret institutional continuity and change in the urban context. The paper proposes that temporary dwellings were evidence of a critical juncture in the regulation of institutionalised housing standards which initiated changes in the control of Sydney's housing. It commences with an exposition of the historical context for temporary dwellings, their construction, and the facilities available to occupants. The suggested theoretical framework is then explored in relation to an observed change in established policies which regulated housing standards. It concludes with a discussion of the concepts of path dependency, positive feedback and incremental change processes within the regulatory institution, and the roles these played in shaping the temporary nature of this policy change in suburban Sydney.

The paper has developed from ongoing doctoral research into the phenomenon of temporary dwellings built during the 1940s and 1950s in the Shires of Warringah and Hornsby and the Municipality of Fairfield, three local government areas located respectively on the northern, north-western and south-western borders of Sydney and overlapping the 'Green Belt', a designated band of open space which circumscribed the metropolitan residential boundaries between 1945 and 1962. A range of primary and secondary sources are used, including state and local government records, published articles and histories, oral accounts from residents, and the buildings themselves.

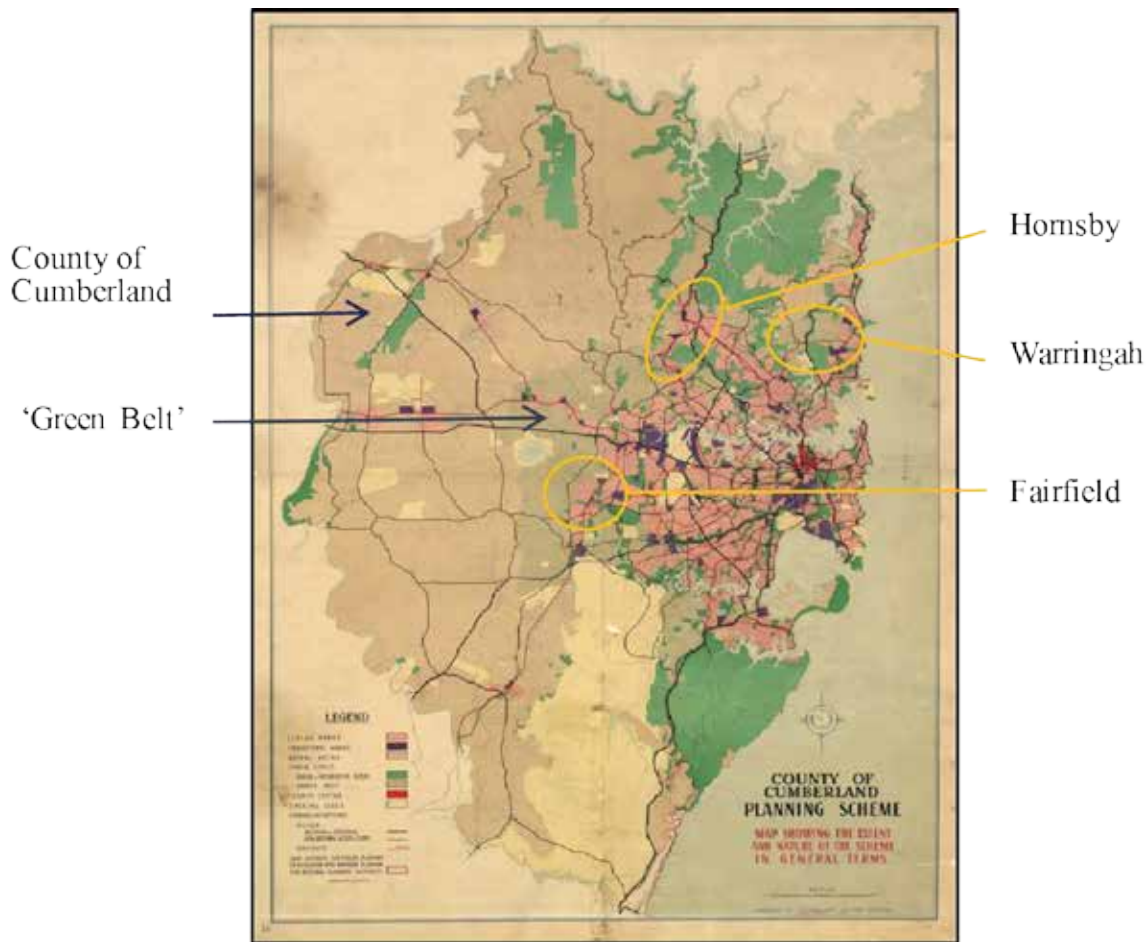


FIGURE 1 Map showing the locations of the case study sites within the County of Cumberland relative to the borders of the 1945 'Green Belt' which circumscribed suburban Sydney during the study period.

## THE HOUSING SHORTAGE AND TEMPORARY DWELLINGS IN SYDNEY

Following World War II, a long-term housing shortage in Australia reached crisis point. The deficiency dated from the 1920s and extended through the depression years of the early 1930s, during which investment in residential building for both rental and owner-occupation was greatly reduced.<sup>5</sup> The resulting shortfall was further exacerbated by the marked contraction of State Housing authorities during the war, control of rental charges, thereby reducing private investment in rental property, and the enactment of wartime legislation which curtailed the supply of building materials for non-defence purposes.<sup>6</sup> At the end of 1944, it was estimated the nation needed between 300,000 and 365,000 homes.<sup>7</sup> The later inclusion of sub-standard housing requiring replacement, housing need in the various Commonwealth territories, and the accommodation of post-war migrants brought the shortfall closer to 400,000 units.<sup>8</sup>

By 1946, the government of the state of New South Wales (NSW) anticipated that 160,000 new dwellings were necessary for that state alone.<sup>9</sup> The same report noted that of this number, Sydney and its surrounding suburbs required close to 90,000 homes, approximately 25% more dwellings than existed in the metropolitan area at the time.<sup>10</sup> Concurrently, it was noted in the County of Cumberland Planning Scheme, the first comprehensive planning scheme for Sydney and its immediate environs, that there were almost 250,000 subdivided but still vacant residential allotments in the County. Half of these were judged to be viable building sites in terms of future utility and infrastructure provision while the other half, comprising close to 120,000 lots, were located on the

outer edges of the metropolitan area with no realistic prospect of utility installation for many years.<sup>11</sup> The majority of this vacant land was held by investors who would not sell while prices were still controlled by wartime profit-limiting legislation.<sup>12</sup>

Immediately after the war, the needed increase in residential building was severely limited by continued shortages of labour and building materials. Building materials were still tightly rationed with each approved application in NSW permitted around 800 bricks and enough timber, cladding, lining and roof tiles to construct a new house of 93sq m, increased a few years later to 111sq m, but even these amounts were frequently unobtainable.<sup>13</sup> The newly-established New South Wales Housing Commission was allocated 50% of available materials but barely managed to achieve 30% of its yearly targets for public rental housing and, by December 1948, was providing limited emergency accommodation in converted defence force barracks within the metropolitan area for more than 3,500 otherwise-homeless families.<sup>14</sup> Newly arrived migrants were also accommodated in barracks and government agencies built tent-encampments for labourers working on infrastructure projects.<sup>15</sup> With housing in such short supply, the vast majority of desperate households were forced to make independent lodging arrangements. Many thousands of people took advantage of the eventual sale of un-serviced building land on the metropolitan fringes of Sydney to buy an inexpensive allotment and acquire some form of temporary shelter while they saved the money needed, and waited for materials and labour to become available, to build their permanent house.

Temporary dwellings within the three study areas of Hornsby, Fairfield and Warringah took a variety of forms. The majority were described on the triennial property Valuation Lists as garages, workshops, sheds or 'sleep-outs'.<sup>16</sup> Such homes comprised a concrete-slab or raised timber floor; timber-frame walls clad in fibrous-cement sheets, and a hipped roof of tiles if obtainable, otherwise of corrugated iron, fibrous-cement sheet, or sheet rubber. Some dwellings were lined with fibrous-cement sheet or 'caneite', compressed fibreboard made from sugarcane waste. Most homes provided floor areas between 10 and 18sq m, as either single-room dwellings with a kitchen area or partitioned into separate cooking/living and sleeping spaces. The Lists also reveal that a significant number of families managed to source less conventional accommodation such as NSW Railways labourers' tents, former army Nissen-huts called 'igloos', old tram-cars or railway freight-trucks, caravans, or 'transportable' single-room houses placed on small iron wheels.<sup>17</sup>

Services available to the occupants were limited. Dwellings were mostly located on estates where utilities had never been provided or, if available, were rarely connected to the temporary homes.<sup>18</sup> For drinking water, cooking, light and heating many occupants relied on rainwater tanks; kerosene Primus stoves, lanterns and heaters; and water heated in wood-fired coppers or open fires in the yard.<sup>19</sup> Sanitary services were provided by a weekly pan-exchange service or occasionally a home-built septic system was installed.<sup>20</sup> Roads were also unmade and comprised a dirt or gravel surface without drainage or footpaths.<sup>21</sup>

The NSW government controlled and regulated the erection of buildings in urban areas through the NSW Local Government Act, administered by the Department of Local Government via the local Shire and Municipal Councils, representative bodies with delegated powers to enforce the various Ordinances. Under Ordinance 71, Building, the requirements for habitable structures relevant for temporary dwellings addressed structural and health concerns and included the design of foundations and sub-floor structure, minimum sizes of rooms and windows, provision for optimal ventilation, the presence and placement of amenities, and availability of a completely enclosed bathroom or bathroom/laundry with water and clothes-washing facilities. Tent occupation required Council approval and compliance with conditions governing the tent's position, construction and sanitation.<sup>22</sup> There was no clause which regulated the more esoteric forms of dwellings used in this period.

Of the temporary dwellings already investigated, none satisfied all the requirements for habitable buildings. The window and ventilation dimensions were usually met, but only half the dwellings satisfied sub-floor space requirements. The required ceiling height was only achieved by dwellings designed as part of a conventional house

and garage homes built in the late-1950s, while the reduced ceiling heights of others made it impossible to satisfy the minimum volume requirement. None of the dwellings reached the 93sq m minimum site coverage.<sup>23</sup> Instead, they commonly covered between 24 and 33sq m. Although water was the first utility installed, the regulation insisting on the presence of a bathroom and laundry was rarely met by any dwellings until after 1952 when many were extended with an external laundry which also included bathing facilities. Sanitary amenities were only available if the dwelling was within the scavenging area agreed between the Council and the waste contractors, otherwise disposal was privately organised.

Calculating the true numbers of temporary dwellings at any one time is difficult. Almost 4,000 temporary dwellings appear to have been built in Hornsby Shire between 1945 and 1960, Fairfield had close to 6,000 over the same period, and the two suburbs in the Warringah sample yielded 600. Records indicate that the incidence varied across the years covered by the study and also between study areas. Dwellings appeared in small numbers in Hornsby and Fairfield during the final two years of the war, slowly increased until 1948, after which the numbers grew rapidly until by 1954 there were more than 3,000 in each local government area. From 1954, the incidence then reduced until fewer than 400 remained by 1960. Development started later in Warringah, yet showed a similar pattern. Close to 60 dwellings were recorded before 1950, with a rapid increase to more than 400 new dwellings by 1954, dropping to around 250 by 1957, and below 100 by 1960.<sup>24</sup>

## HISTORICAL INSTITUTIONALISM

In an attempt to analyse and interpret the emergence, entrenchment and decline of temporary dwellings in the context of post-war Sydney, this paper draws on the theoretical framework of Historical Institutionalism suggested recently by Sorensen as an analytic tool for urban studies.<sup>25</sup> Sorensen describes Historical Institutionalism (HI) as ‘a social science research method that focusses on the creation, persistence and change of institutions over time’. In defining institutions, he draws on political-economist Peter A. Hall’s definition as ‘the formal rules, compliance procedures and standard operating practices that structure the relationships between individuals in various units of the polity and economy’, and on sociologist, Wolfgang Streeck and political-scientist, Kathleen Thelen’s description, which includes concepts such as the collective enforcement of expectations, the performance of various activities, and inherent relations of power. Thus, Sorensen arrives at a planning specific definition of institutions as ‘collectively enforced expectations with respect to the creation, management, and use of urban space’, where collective enforcement involves state coercion of the individual to comply with enacted laws and by-laws.<sup>26</sup> In a listing of urban institutions, Sorensen includes land development rules and building standards, the instances with which this paper is particularly concerned.

Integral to HI analysis are the related concepts of critical junctures, incremental adaptive processes, path dependence, and positive feedback, each playing a role in institutional continuity and change. Change in policy can be either rapid or gradual. Critical junctures are described as rare events which create opportunities for rapid change, are points of crisis that cannot be resolved through the prevailing political or institutional structures, involve a loss of governance ability on the part of the institution, and can result in individuals or groups reshaping existing institutions or establishing new institutions and developmental pathways. Sorensen notes that small decisions made in response to a critical juncture can have long-term or lasting impacts and their timing in relation to the prevailing social, political and economic situation can influence the shape of subsequent institutional development. In contrast to the abrupt change inherent in a critical juncture, incremental adaptive processes such as displacement, drift, layering, and conversion are modes of gradual policy change through which political actors can transform institutions by varying the levels of rule implementation and compliance enforcement.<sup>27</sup>

Path dependency and positive reinforcement refer to concepts which support the continuation of existing institutions. Path dependency describes the tendency of a course of action instigated by an initial choice to become increasingly entrenched as the chosen action is adopted more widely over time and so yields increasingly positive, primarily economic, returns. Ongoing investment in the original choice therefore increases the cost to the institution of changing to an alternate path. Related to path dependency but identified by Sorensen as perhaps more relevant to political and urban processes, positive feedback describes how change to an institution is actively discouraged by its members due to an increasing number of participants acquiring an interest in, and directly benefiting from, its unmodified continuation.<sup>28</sup>

## **POLICY AND REGULATION IN SYDNEY 1942-1953**

This paper proposes that a critical juncture in the institutionalised regulation of housing standards in Australia created the opportunity for institutional change. For the government of NSW, the situation commenced on 24 December 1942 with acceptance of the Commonwealth Powers Bill 1942, enacted into federal law on 30 June 1943.<sup>29</sup> Reflecting the newly-elected federal Labor government's concern that post-war reconstruction should consider 'the whole aspirations of the people for a better way of life' and in an effort to ensure equality in the distribution of limited resources and reduce potential for inflation and unemployment, this Act referred certain State responsibilities to the Parliament of the Commonwealth until five years after the cessation of Australia's involvement in the war.<sup>30</sup> The responsibilities included control of the production, sale, distribution and prices of all materials and commodities, which involved building materials and internal fixtures as well as the sale price of vacant land. Within four weeks of enactment, the Commonwealth Department of Post-war Reconstruction had curtailed access to building materials for non-defence purposes and all residential building virtually ceased.<sup>31</sup>

Combined with the long-term housing shortage, NSW's acceptance of the December 1942 Bill precipitated a crisis of such magnitude in the provision of housing that the NSW government lost governance legitimacy concerning the regulation of housing standards. The loss of governance on the part of the supervisory State entity effectively removed the capability of local Councils to enforce many aspects of Ordinance 71, particularly the requirement that all regulations must be satisfied before a Certificate of Compliance was issued and occupation could commence.

In January 1943, within two weeks of NSW acceptance of the initial Bill, Hornsby Shire councillors found they were unable to refuse permission for the occupation of partial or temporary dwellings and finally approved a small number of previously-rejected requests.<sup>32</sup> In July 1943, Warringah councillors appealed to the Department of Local Government for amendments to the Local Government Act 1919 which would allow them to approve temporary dwellings on condition they were demolished after the war, but the response received from the Department provided no definitive guidance. The Department simply agreed that 'the position which confronts Councils today with regard to the erection of small war-time dwellings is difficult', and suggested that demolition could leave families without shelter. The letter concluded that any decision on the ultimate fate of temporary dwellings should therefore be left for the future.<sup>33</sup> With this response, the Department of Local Government effectively conceded their inability to enforce the state's institutionalised housing regulations and an opportunity opened for change in the concept of acceptable standards for habitable dwellings.

Although now established as an acceptable form of housing, the numbers of temporary dwellings increased only slowly during the five years that the Commonwealth retained its control of materials and land sale prices. A small number of residential allotments were made available at the controlled price of 10% above the 1942 Department of the Valuer-General valuation figure and were purchased by buyers using savings or war-time gratuities, who then applied for permission to build a shack, garage or workshop home or alternatively, built without approval.<sup>34</sup> As Councils had no precedent for dealing with this new housing form, the occupants decided the size, materials and

facilities they could afford or source for their dwelling and permission was granted for a six month period with no building requirements imposed.<sup>35</sup> These early dwellings therefore set the standard for the alternative housing path which became the norm for many aspiring home-owners.

In August 1948 the Commonwealth Powers Act expired and the control of land prices lapsed, thousands of vacant lots were finally put up for sale, and were bought by individuals desperate for shelter with the goal of building a house or to have one built for them.<sup>36</sup> However, in order to maintain control of inflation and to share materials impartially, NSW retained rationing of building materials with the Building Operations and Building Materials Act 1948.<sup>37</sup> The majority of new landowners therefore had little choice but to build what was now the standard form of interim shelter and the use of temporary dwellings became increasingly widespread.<sup>38</sup> The entrenchment of the new housing form can be gathered from the local Council Minutes and contemporary newspapers, popular journals, and collections of housing plans. From the beginning of 1949, the Health and Building Inspectors of all three Councils requested approval of between ten and twenty new temporary dwellings each fortnight and a similar number of extensions of temporary occupancy, all of which received approval without conditions.<sup>39</sup> Newspapers of this period also contained numerous advertisements for garage-kits, portable and 'nucleus' homes, a dwelling on iron wheels, and land sales complete with temporary dwelling.<sup>40</sup> Similarly, popular journals included articles on topics such as garage conversions, packing-case houses, and plans for 'nucleus' homes.<sup>41</sup>

However, the newly-accepted housing standards proved to be only a short-term change of policy as positive feedback mechanisms promoted a return to entrenched principles. Disapproval of the proliferation of non-compliant dwellings was voiced by more-established residents as early as 1946, but it was not until the NSW Building Operations and Building Materials Act expired on 30 September 1952 and Ordinance 71 was simultaneously amended to prohibit the occupation of temporary structures that community concerns began to influence official attitude. Agitation to return to the previously-agreed standards became more organised and pressure continued to be exerted by residents anxious that the value of their complying housing would be compromised by the alternate housing form. In Warringah, District Progress Associations lobbied the local Councillors to enforce the enacted building standards to prevent the formation of 'shanty towns', while, in an exclusive part of Hornsby Shire, applications for a tram-car home and a caravan dwelling were judged to be 'detrimental to the amenity of the area' and were rejected by elected local representatives.<sup>42</sup>

Although the shortage of housing continued, in response to public concerns and recent changes in State government policies each Council resolved that all applications for temporary dwellings from August 1953 were to be refused in favour of investment in a partial house.<sup>43</sup> The Health and Building Inspectors concerned were therefore requested to provide lists of the current status of all existing temporary dwellings and urged to ensure occupants' compliance with the condition requiring continual progress on the permanent house.<sup>44</sup> To be regarded as habitable, all temporary dwellings were now required to include the bathing and washing facilities mandated under Ordinance 71 but previously dispensed with by resolution of the Councils concerned.<sup>45</sup> The requirement for partial-houses was not enforced by the Council officers of Hornsby and Fairfield, but was actively enforced in Warringah where the number of new applications for temporary dwellings rapidly declined.<sup>46</sup>

## DISCUSSION

The emergence of post-war temporary dwellings in Sydney can now be explained as the result of a critical juncture in the institutionalised regulation of housing standards. The critical juncture occurred with the enactment at the federal level of government of wartime legislation which continued into the immediate post-war period. This meant that building material essential for the achievement of housing to institutionally approved standards was no longer available at the same time as the demand for housing began to significantly increase. Governance legitimacy was lost as local Councils were discouraged by the State entity from exercising their delegated powers

to enforce established Ordinances which defined habitable structures, and a non-complying form of shelter emerged almost unchallenged. This nascent standard of housing was accepted and controlled through policy changes at the local level and became a new institutionalised norm for a significant proportion of the metropolitan population.

Although the new housing standards made the acquisition of much-needed shelter possible for many desperate families, this alternate housing path turned out to be transitory due to the combined action of positive feedback responses and incremental adaptive change. Positive feedback effects influenced those residents with an interest in reinstating the previously-established housing policies, who then actively promoted a return to the institutionalised path at the local level. Return to this original path became a policy option with the termination of the Federal legislation instrumental in precipitating the critical juncture and the regaining of legitimacy by the State government, which could now uphold local government enforcement of the established standards.

The continued existence of temporary dwellings was also affected by incremental and adaptive policy changes, where the existing Ordinance and local by-laws were gradually altered through the layering of new policies which reflected both popular desire for modern design and the limited finances of many occupants. The new policies permitted smaller houses than previously, accepted modern housing styles which were less expensive to construct, and allowed use of lighter building materials.<sup>47</sup> Such regulatory changes made it cheaper and easier to build a complying house and therefore more achievable for marginal owners, who could now afford to build to the revised standards or, in certain cases, to extend and improve the existing temporary dwelling to suit the modified regulations.<sup>48</sup> The reinstated policies, combined with latent aspirations for orthodox housing among owner-occupiers, meant the remaining dwellings were gradually removed, repurposed, or adapted to converge with the institutionally-approved housing model.

## CONCLUSION

At a time when both federal and state planning entities in Australia were concerned with large-scale schemes for housing the rapidly-increasing urban population, the construction and occupation of temporary dwellings on purchased land became a widespread autonomous solution to Sydney's post-war housing shortage. Even though this non-compliant housing posed a direct challenge to institutionalised housing standards, the use of such structures became increasingly accepted throughout the metropolitan fringe then gradually declined in volume to essentially disappear as a popular suburban housing form.

Following Sorensen, this paper proposes that a useful analytic tool when interpreting the political context for this phenomenon is the theory of Historical Institutionalism with its inherent concepts of critical junctures, path dependence, positive feedback effects and incremental adaptive change processes. The unexplained emergence and proliferation of temporary dwellings can now be understood as stemming from a critical juncture in the regulation of housing standards. The slow diminution and termination of this new housing path can be partly attributed to positive feedback effects causing concerned residents to push for a return to the original policies. This impetus to resume the institutionalised path was accompanied by the layering of new policies onto the original housing Ordinances in a process of incremental adaptive change.

Although largely abandoned as a viable housing form within fifteen years of construction, many of the temporary dwellings which were constructed and occupied during this period are still visible in the suburban landscape of Sydney and are evidence of a housing path which emerged to satisfy an immediate and urgent social need but was not permitted to continue.



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## Disclosure Statement

No potential conflict of interest was reported by the author.

## Notes on contributor

Nicola Pullan is a doctoral candidate in the Faculty of Built Environment at UNSW Australia, having completed previous post-graduate studies in history and in museum studies. Her PhD research is on the construction and occupation of temporary dwellings in the outer suburbs of Sydney between 1945 and 1960, with particular focus on their significance in enabling wider access to home-ownership in the metropolitan area.

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Figure 1: Cumberland County Council. Planning Scheme for the County of Cumberland New South Wales, Sydney: Cumberland County Council, 1948.



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# RESILIENCE OF DWELLINGS AND THE CREATION OF LIVEABLE HISTORICAL RESIDENTIAL AREAS IN CHINA

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There are numerous traditional residential buildings in China, but only in the last sixty years have academics studied historic dwellings. Currently, there are four metropolises, Beijing, Shanghai, Guangzhou, Shenzhen in mainland China, and with a number of unique traditional residential areas, such as Hutong, Linong, and Qilou. In 1928, due to Liang Sicheng's contribution, the first Department of Architecture in China was established and Western theories of conservation were introduced as well. However, due to the Chinese Cultural Revolution, preservation activities were interrupted in the 1950s. Also, beginning in the middle of the twentieth century, because of their ambition to develop the economy, Chinese elites attempted to expand their cities and transformed these places in response to the demands of urbanization. Despite learning from the experiences of other countries, an effective and harmonious development situation has not yet been established in China. The application of preservation concepts began again in the 1980s by the government; however, most contemporary architectural scholars have no clear knowledge about modern conservation theories. Even the researchers who have roots in this field might not appropriately explain and apply these theories in practice. From 1997 to 2008, some residential areas were preserved and listed as World Heritage Sites, such as the Ancient City of Pingyao and the Old Town of Lijiang. All of these sites are located in rural or suburban areas. Comparatively, in urban areas, some inhabitants are suffering from poor living conditions in high-density neighbourhoods. Indeed, this has become a common phenomenon in China's cities. Development of modern cities is a process of capital operation. If residents who live in these historic dwellings or inhabitants who are affected by the circumstances and sites of those old buildings do not pay attention to protection issues of the traditional dwellings, then our common culture and history will eventually be eroded. The significance of protection lies not simply in displaying these historic residences, but in continually using sustainable renovation methods, and maintaining their own characteristics. Moreover, in the developing process, because of shortage of issues of funding, housing property and ambitions from governments and capitalists, attention to inhabitants' real lives in the remaining residences will not be seriously concerned. Accordingly, in this research, answering how to support the sustainable development of traditional residential areas will include an overview of the history of heritage, dwellings, and neighbourhood preservation, its shifting values, goals, tools, and techniques, and their influence on preservation activities over the last sixty years in China. First, this study will make an argument about the specific implications of the theories, principles and values of preservation and their changes. It will also analyze case studies— mainly in Shanghai, Pingyao and Yangzhou — to record and classify different obstacles in preserving processes and the sustainable development of historical dwellings. With these steps, this study aims to strike a balance between the preservation of historic dwelling structures and recreating approaches for continuous use in order to benefit both the economic growth in cities and inhabitants' lives in historical dwellings.

## **Keywords**

Historic residences, Western heritage theories, Restoration and conservation theories, Interpretation problems, Sustainable development, Regulations, Local authority, Capital, Preservation activities, Liveable areas, Living balance



The Urban Fabric

# Morphology, Housing and Renewal





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# Housing Production

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*Chair: Florian Urban*



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# SITES AND SERVICES IN PERFORMANCE: HOUSING IN ADDIS ABABA BEYOND CRISIS AND HEROISM

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The so-called “sites and services” program was arguably one of the most successful cases of affordable housing promotion in the developing world. The turn of the 1980s was the heyday of this program and the World Bank its main sponsor. However, from the late 1980s on, a combination of geopolitical shifts and the pressure of neoliberal policies steered to its decline. In the meantime, what happened to the settlements created more than three decades ago? How do people live there? What can we learn from the performance of these settlements, neighbourhoods and townships? To contribute an answer to some of these questions, I will examine the case of Nefas Silk, a sites and services settlement with approximately 3500 plots, sponsored by the World Bank and built in Addis Ababa in the 1980s. In the urban global South, Nezar AlSayyad contends, forms of urbanization, social actors and forms of social organization should be investigated employing an intellectual framework that embodies urban informality as a “new” urban paradigm and a “new” way of life. However, as Ananya Roy points out, informality is often addressed from two opposing and conflicting frames: crisis and heroism. On the one hand there are those like Mike Davis who express deep concern for the disruptive characteristics of informal urbanization, and on the other hand those like Hernando de Soto who praise the entrepreneurship of the informal sector. In either case, however, there is a pervasive tendency to create a divide between formal and informal urbanization, authority and self-help, control and freedom. I will use AbdouMaliq Simone’s notion of “people as infrastructure” as an intellectual framework to contest this divide. In doing so, I aim at bringing about alternative approaches to cope with the mismatch between rapid demographic growth and limited financial resources in the implementation of housing policies in the developing world. I will discuss the potential of progressive development for the majority as opposed to instant development for a few as a strategy to promote a synergy between affordable housing solutions and sustainable urban growth. The goal of my paper is to produce a critical account on development aid policies based on affordable housing solutions underpinned by the concept of incremental growth. Using documentation gathered in empirical research on housing figures built in Addis Ababa from the 1974 revolution on, I will compare the Nefas Silk sites and services settlement with a housing figure promoted in the 1980s by the Norwegian non-governmental agency Redd Barna (Save the Children) and a housing programme developed in the mid-2000s by the Ethiopian government with technical support provided by the German international cooperation agency, GTZ. With the result of this comparative analysis I will single out the potentials and the threats of reconceptualizing the sites and services programme to develop new housing policies and to produce knowledge to support design decision-making processes for all the stakeholders engaged in actively promoting sustainable development of affordable housing in the global South.

## **Keywords**

Architecture, Sites and Services, Urban Informality, Sustainable Development, Incremental Housing



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# THE NEW TENEMENT

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The Hofdijk Housing Scheme in Rotterdam (Jan Verhoeven, 1977-83), the Hundertwasser House in Vienna (Friedensreich Hundertwasser/ Josef Krawina, 1982-84), and the International Building Exhibit block on Ritterstraße in West Berlin (Rob Krier and others, 1981-83) were all showcase projects by which their respective municipal governments promoted specific local policies aimed at the regeneration of the inner city. They were aimed at complementing or reversing several decades of functionalist planning which at the time was increasingly perceived as destructive and outdated. My paper will present these projects as evidence of an emerging European discourse about the qualities of urban life. These new ideas mixed anti-modernist criticism with nostalgic images and strategic goals, absorbing conceptions about the city as a generator of creativity and innovation, locale of democracy and productive debate, and object of identification and personal attachment. The showcase projects of the 1970s and 1980s were connected to this discourse, through their characteristics. They generated public space in the form of traditional squares and corridor streets and perceived as a counterproposal to the bleakness and disorienting arrangement of many modernist tower block estates. On the other hand they related to a revised view on the nineteenth-century metropolis, which since the 1970s was no longer predominantly connected to blight, filth, and oppression, but rather to intellectual advancement, political reform, and artistic innovation. Thus they operated in the generation of a post-modernist intellectual framework that influenced planning in European cities to date.

**Keywords**

post-modernist planning, 1980s architecture, return to the inner city, Hofdijk Housing, Hundertwasser House, Ritterstraße, IBA



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# THE NEOLIBERAL URBANIZATION IN SAO PAULO, BRAZIL: THE CASE OF AUGUSTA PARK

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The current neoliberal environment transforms the urban space and restructures the city, creates marginalized and segregated urban environments and replaces public spaces with private amenities. Augusta Park represents a kind of resistance to accelerated neoliberal urbanization in São Paulo. To demonstrate this we contextualize Augusta Park as a public space, in the downtown area of São Paulo, representing a significant green area. Then we show how, in recent years, the region has become a strong target for the property market who intends to suppress the Park to make way for luxurious housing. This fact has generated a large mobilization of the park's users, locals and others, who demand that this area be preserved and handed over to the population in the form of a public space. The case remains a legal process in the courts. So, we analyzed urban planning in São Paulo to understand the effectiveness of urban management and social actors involved in the protection of public spaces. In conclusion, we believe that despite the devastating effects that neoliberal practices are having on the local way of life, promoting the disintegration of history as well as the memory of the city and decaying urban spaces definitively, Augusta Park reveals itself as a potential resistance to this neoliberal influence.

## Keywords

Neoliberal Urbanization; Resistance; São Paulo; Augusta Park

## How to Cite

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## INTRODUCTION

The purpose of this article is to demonstrate that urban sprawl threatens public spaces and green areas in the city. From this perspective, we will analyze the trends of the current neoliberal urbanization in São Paulo, using as an example the case of Augusta Park. For this, we must analyze urban planning in the city of São Paulo throughout the twentieth century to understand the performance of urban governance and social actors involved in the protection of public spaces and green areas in the city. Then we must understand that metropolis of São Paulo and the current neoliberal model prioritizes urban spaces privatized to the detriment of public spaces, and as an example, we discuss the case of Augusta Park, a private green area very important to São Paulo who needs be protected for all inhabitants of to the city. This case was chosen because it shows that green spaces in big cities should be protected, that the public interest in a park should be given preference over the interest of private investment and that environmental protection in Brazil is insufficient. The case was examined by a bibliographical and documentary research about the Park. Earlier this year, we made contact with some key actors such as Mr. Augusto Aneas, a member of the Augusta Park Organism or *Organismo Parque Augusta (OPA)* who uncovered relevant information about the area. Mr. Aneas leads a community on facebook called Augusta Park Movement that is fighting for total preservation of the park, free of private capital and adverse effects arising from neoliberal urbanism. In fact, we believe that neoliberal urbanization transforms the city and while it generates social segregation and urban fragmentation it creates spaces as a symbol of resistance to this new urbanism such as Augusta Park.

## URBAN PLANNING IN SÃO PAULO: A HISTORICAL VIEWPOINT

To understand urban planning in the city of São Paulo during the twentieth century, we highlight four important periods in the process of the city's expansion, they are: the city as a national locomotive metropolis between the years 1889-1945<sup>1</sup>; the city as a vertical metropolis between the years 1945-1964; the modern metropolis between the years 1964-1982; and the metropolis of democratic management since 1982<sup>2</sup>. These periods are directly related to the historical and political scenario of the country at each moment. Since the proclamation of the Republic in 1889 until the end of the military dictatorship in 1982 and the restoration of democracy, noting that urban policies were (and still are) driven by the interests of elites and big capital. At first, urbanization came in São Paulo as a result of the transition from coffee based commerce to industrial activity, which as a result brought the modernization of the city. The coffee industry provided the first urban infrastructure because "(...) established banks and railroads, requiring financial and business development, as well as manpower training for complex production tasks, all allowed and encouraged subsequent industrialization in São Paulo<sup>3</sup>". São Paulo<sup>4</sup>, in this period, presented itself as an agro-export market town formed by a ruling class that identified with city planning models of a European structure, in terms of the physical arrangement, sanitation and overall aesthetic of the city. The urban landscape was composed of green areas and parks, establishing limits on the buildings and the size of the streets, reproducing the aesthetic-sanitarian European standard<sup>5</sup>, especially in the central areas, where today Augusta Park is located.

In the same vein, Campos<sup>6</sup> points out that:

*The urban transformation policy undertaken in the first decades of the twentieth century, seen as the modernization and "Europeanisation" of São Paulo, had as its main objectives the creation of prestigious central spaces each capable of optimizing their performance in regional and urban dominance as well as the creation of luxury residential neighborhoods for the upper-class with an advantageous connection to the city's infrastructure. For the remainder of the city the segregation of social housing and disfavoured use of low cost land was undertaken.*

As an example, in the early twentieth century, many wealthy families such as that of Fabio Uchoa built their "palaces" in the *art nouveau* style as their residences. Such constructions were seen to implement the intended



standard aesthetics of the city. Such residences had large green areas thus following the European model of urbanization at the time. The Uchoa's residence and its garden is where Augusta Park is located today as will be explained in the next section. In the 1930s, urbanization in São Paulo was concerned, predominantly, with the formation of roadways, replacing trams and rail systems with motor vehicles through an economic standpoint which aimed to modernize the city-locomotive. The most significant urban plan of that period was the "Avenues Plan" of the then mayor Prestes Maia<sup>7</sup> who remodeled the road system of São Paulo, consolidating the city's southwest sector with the greatest urban infrastructure, stimulating the automobile industry and segregating spaces of the city. In the second phase, São Paulo<sup>8</sup>, a vertical metropolis presents itself as a true industrial city, based on the Fordist model of development, driven by an Urban Basic Plan which aimed for integrated planning linking all urban functions. From the 1950s onwards, the real estate boom driven by the first planned neighborhoods such as Jardim Europa, Pacaembu, Cidade Jardim, City Lapa built by City Company<sup>9</sup>, all in an attempt to better define the urban framework, denote true private urban planning and capital trends in São Paulo.

At the same time, this plan accelerated verticalization in the form of skyscrapers, consolidating the trend of the city's urbanization which is "A focus on a certain area of the city, that of housing of the elite and the capital's leading economic activities"<sup>10</sup>. This segregating and uneven process of urban verticalization is the result of ineffective urban planning, because it generates deep antagonisms in the city, such as the threat on the quality and quantity of urban public spaces.

In the third period, the city of São Paulo<sup>11</sup> is marked by the shifting of industries out of the city, with a view to reconfiguring the production process that generates competitiveness, boosting the modernization of business activity.

At this time, the urban space modified by the strength of capital and its influence from an economic planning standpoint enhanced socio-spatial segregation, reinforced urban inequality and caused land overvaluation, as it served only the interests of real estate capital. This process was encouraged by mayor Figueiredo Ferraz who created the Master Plan of Integrated Development – MPID by law number 7,688 in 1971.

In the fourth and last phase, the metropolis of democratic management, the city's growth was subject to the global economy and due to the sharp deindustrialization process of the city<sup>12</sup> was marked by a high concentration of multinational companies which provided advanced services.

This post-industrial city represented by transnationalization and flexibility of capital now requires new forms of production of the urban space and city planning. Fordism was replaced by a flexible accumulation regime, resulting in new urban forms and in new city networks.

In this fourth degree of increasingly heterogeneous and unequal modernization, we perceive the emergence of new "specialized centers" brokered by private capital, reshaping the idea of public and private spaces, such as: business complexes, gated communities, hypermarkets and shopping malls, that result in the transformation of the urban space of São Paulo.

Within the significant contemporary urban change of this process, Frúgoli Jr.<sup>13</sup> points out: "the widely decentralized pattern of urbanization, changes in public space, the residential segregation model, the extensive system of freeways, considerable ethnic diversity".

From 1988 with the Federal Constitution of Brazil and the democratization of the country, cities with more than 20,000 (twenty thousand) inhabitants are required to draw up their own master plan, a valuable instrument to implement the National Policy of Urban Development in Brazilian cities.

Based on this, the mayor of São Paulo Erundia in 1991 produced the first Participative Master Plan with direct involvement of various entities and actors of civil society, creating regional units planning to boost law enforcement in all areas of the city of São Paulo.

In 1993, the mayor Paulo Maluf disabled the regional units of planning and intensified the urban infrastructure projects at level of roadway transportation, stimulating mega real estate projects of large real estate developers.

Only in 2002, the then mayor Marta Suplicy could approve the City Council's Strategic Master Plan – SMP of São Paulo by law number 13,430/2002 and create among other institutes, special areas of social interest. Recently, in 2014, the SMP was amended by Law number 16,050/2014.

Actually, the tendency of São Paulo urban planning still prioritizes individual transportation where the urban space is the indispensable instrument of economic growth, and urban planning is subordinated to the logic of global economic power, where Augusta Park is an exemplary case.

Today, the real estate market in São Paulo is the expression of market logic, because the strength of the volatile capital changes and defines the built environment, according to Harvey<sup>14</sup>, transforming attributes into merchandise. This notion of a merchandise city raised by Vainer<sup>15</sup> is strengthened, because only those who have money to pay for the land have the right to the city.

The logic of reproduction of space as a commodity, together with the forces of urban globalization, is the same logic as neoliberal urbanism<sup>16</sup> that threatens urban green areas and public spaces as the center of all social activities, whether cultural, political or economic.

This demonstrates that the master plan (as well as other laws regulating the cities) is not properly fulfilled. Private capital, coupled with the State's failure, plans, directs and builds the city according to its interests. In São Paulo, as well as in several cities around the world, this process contributes to the loss of public space in view of the deepening of urban fragmentation that transforms the cities.

It is important to understand that urban planning is a state tool to guarantee all citizens the right to the city. It is a political instrument required to implement the national urban development policy, and should be developed through a participatory and democratic process in order to generate more public spaces, more urban green areas to improve the quality of city life.

## REGULATION OF URBAN ENVIRONMENT IN BRAZIL

In this section we will address the legal instruments supporting the urban environment in Brazil, as a way to thoroughly examine the following discussion about Augusta Park. We will then note that there is an extremely advanced set of environmental and urbanistic regulations in the country; however, their compliance conflicts with greater forces or interests, such as the globalized economy and the real estate market, which mold the urban space.

Urban environment in Brazil is regulated by the National Urban Development Policy (NUDP) provided in article 182 of the Federal Constitution of 1988 (CF/88). According to CF/88, it is incumbent upon the municipality to enforce the NUPD. That policy must give priority to the organization and full development of social functions in the city and ensure the welfare of its inhabitants.

The City Statute, Federal Law number 10.257/2001, regulates the NUDP and establishes the principles, guidelines and objectives for urban development and planning in Brazil. Among the guidelines provided in article 2 of that Law, the following stand out: (i) the guarantee of the right to sustainable cities; (ii) the democratic management

of urban space through popular participation; (iii) the cooperation between governments, private enterprise and other sectors of society to meet social interest; and (iv) the protection, preservation and recovery of the natural and artificial environment, and cultural, historical, landscape and archeological heritage.

As such, urban planning and popular participation must give priority to sustainability, that is, it must contribute to social justice in urban environment, to the quality of life in the city through the equilibrium between natural and artificial environment, thus promoting the need for development related to the capacity for support<sup>17</sup>. Concerns over sustainable urban development represent the possibility of ensuring social-political changes that will not endanger the ecological and social systems supporting cities. This is the most important reason that we need to protect green areas in the city, especially those areas that have native vegetation that represent the history and memory of urban space like Augusta Park. Protecting these areas means protecting the environment holistically to ensure better quality of life in the city.

In this sense, to be sustainable the urban development must contribute to:

*“(...) the improvement of the material and subjective living conditions in cities by reducing social inequality and ensuring environmental, social and economic sustainability. In addition to the quantitative dimension of urban infrastructure, services and fixtures, urban development also involves an individual and collective expansion of social, cultural and political expression as opposed to prejudices, segregation, discrimination, nepotism and co-optation<sup>18</sup>”.*

The basic instrument of the NUDP to achieve sustainability at municipal level is the Master Plan set forth in §1st paragraph of article 182 of CF/88 and articles 39 to 42 of the City Statute. To Mattos<sup>19</sup> “the master plan is the instrument that establishes the basic requirements for property to perform its social function”. That plan is mandatory for cities with more than twenty thousand inhabitants, making it, therefore, the true municipal law governing urban planning.

Recently, the city of São Paulo<sup>20</sup> reviewed its Strategic Master Plan (SMP) through the Municipal Law number 16,050 of July 31, 2014, which regulates the Municipal Urban Development Policy and is the basic definitive instrument for all public and private agents acting in the urban space of São Paulo.

Among the principles set forth in article 5 of the SMP, which govern sustainable urban policy in São Paulo, the following stand out: (i) the social function of the city that comprises the satisfaction of citizens’ needs related to quality of life, social justice, universal access to social rights and socioeconomic and environmental development, including the right to urban land, proper housing, environmental sanitation, urban infrastructure, transportation, public services, work, peace and leisure; and (ii) the right to the city comprising the universalization of access to the benefits and conveniences of urban life by all citizens through the offer and use of services, equipment and public infrastructure.

In addition, one of the guidelines of the São Paulo urban development policy is the expansion and requalification of public spaces, green and permeable areas and landscape. In the same sense, the production of private real estate must contribute to expand green areas in the city and the harmonious coexistence between public and private spaces.

According to article 32 of the SMP, the territory division is established by special zones determined by São Paulo municipal zoning. Such zones take into account the characteristics and specific destination of the territory<sup>21</sup>. Among the main special zones, it is worth highlighting the following: (i) the Special Cultural Preservation Zone<sup>22</sup> and the Special Environmental Protection Zone<sup>23</sup>.

Further, article 265 of the same Law defines the Green Area System, which includes areas protected by the environmental law, such as the public or private parks or spaces with vegetation. Urban parks, when created, are public green areas. However, private green areas, according to the law or as requested by the owner, may be included in the Protected Area, Green Area and Free Space System.

In this sense, we note that the Brazilian regulations, and particularly the legislation of São Paulo, include several guidelines guiding the growth and development of cities and regulating the use and occupation of urban soil by providing principles and guidelines aimed at sustainable urban planning, the basic objective of which is to contribute to social justice in the urban environment ensuring the right to the city for all citizens.

But, unfortunately, despite the modern set of laws aimed at the protection of urban space in Brazil, we observe intense lack of protection of green areas in Brazilian cities like São Paulo, where the property market leads the transformation of urban space according to their interests. This is what we see in the case of Augusta Park.

## THE CASE OF AUGUSTA PARK

The area known as Augusta Park is a private property measuring approximately twenty-five thousand square meters and located in one of the most valued regions in the center of the city of São Paulo, between the streets of Augusta, Caio Prado and Marquês de Paranaguá. At the beginning of the 20<sup>th</sup> century, this area accommodated a large residence built by the architect Victor Dugubras (french architect living in Brazil at time) to be the official residence of the family of Fábio Uchoa, a family that created its wealth with the coffee trade. The home with eclectic style could be considered a precursor work of Paulista School of Architecture<sup>24</sup>.

This building and a lot of constructions around downtown São Paulo could be represented by the first period in the process of the city's expansion: the city as a national locomotive metropolis, according to Souza<sup>25</sup>. At this moment São Paulo implemented the intended standard aesthetics of the city, following the European model of urbanization at the time. But the Uchoa's family sold the house to a missionary group of Belgians based on the philosophy of St. Augustine. The house together with the surrounding park became the location of the famous female college Des Oiseaux that operated from 1907 to 1969.

The college was demolished in 1974<sup>26</sup>, leaving a wood with several native species of the Atlantic Forest that was home to several species of birds, as well as being the site of the walls and an old house that remained from the school. The demolition of the college represents the transition between the second and third period in the process of São Paulo's expansion when the city started to become more vertical and the old buildings disappeared to make way for new modern constructions. Nowadays, downtown São Paulo is one of the largest areas of interest for large developers. This area is the target of large enterprises and strong real estate speculation and it suffers the global symptoms of gentrification and neoliberal exploitation of urban territory. This is the fourth moment of São Paulo's expansion, when the metropolis of democratic management should prevail but was influenced by the neoliberal urbanization process, where land has great value and the city is considered a commodity<sup>27</sup>.

This violent process leads to the sudden change of the landscape, the demolition of historic buildings, the destruction of the social and cultural fabric, the expulsion of the surrounding population, especially those using the space as a historically recognized meeting place.

For more than forty years, the civil society has endeavored to transform the area into a public park with the support of the association of local residents and urban social movements, such as the Cerqueira Cezar Society of Friends, Residents, Commerce and Services – SAMORCC and the movement Allies of the Park. Currently, several collective cultural movements support Augusta Park free of buildings, such as the Artistic Movement of Urban Occupations – M.A.O.U.

Since 2002, when the Master Plan was approved by law number 13,430/2002, the Augusta Park was considered as a green area to be protected and utilized by population until 2014, but in fact the law was not applied. Actually, Augusta Park represents part of a green corridor, the structural axis of the city that should be preserved also for the absorption of rainwater. It's part of a green belt required for quality of air and quality of life for all city residents.

In 2004, given the importance of the area and through the Resolution No. 23/2004, all species of existing trees were listed by the Municipal Council for the Preservation of Historical, Cultural and Environmental Heritage of the City of São Paulo – CONPRESP. In addition to trees, the buildings of Des Oiseaux College, the main gate, the right-of-way gate, the walls of the landed estate and the wood house were also listed. According to the Counsel, the area must be expropriated to become public, which would cost the municipal government a large amount given the strong real estate speculation in the region.

In 2013, the mayor of the city of São Paulo, Fernando Haddad, approved the law number 15,941/2013 and authorizing the creation of Augusta Municipal Park. However, due to political and economic interests, the law has not been complied with, it's supporting the private interest of companies and encouraging real estate speculation. In the same year, shortly after the approval of this law, the building companies Cyrela and Setin Incorporator bought the landed estate and announced the construction of a mega real estate project in the area, which gave rise to major protests from the community in favor of the preservation of the area. The Figure 1 below sums up the case.

This image shows the period between the approval of the law that established Augusta Park and the reaction of the companies which are the owners of the area, Setin and Cyrela. Before this, the Park was open to the public despite being degraded and abandoned by the government. Since 2014, the Park is closed because some movements filed a class action in court to prevent the contractors from building their project. At this moment, some activists held a meeting to create the most important social movement called Augusta Park Organism or *Organismo Parque Augusta (OPA)*.



Before Setin and Cyrela  
Without walls, gates or fences



Today Still Closed:  
The area is like this



After Setin and Cyrela:  
All gates are sealed



Setin & Cyrela, and the Government:  
They want it like this

FIGURE 1 Augusta Park in four moments

*“OPA is a self-managed, horizontal and heterogeneous movement. It has no leaders or group or entity officially constituted to represent it. It is organized by public meetings, working group meetings, direct actions in the streets and on the worldwide web. It is open to the participation of anybody interested in supporting the cause<sup>28</sup>”.*

The principles of the movement are: primacy of the public space; total transparency; direct democracy; world citizenship; pluralism and horizontality. One of the aims of the movement is to demonstrate that urban sprawl threatens public spaces and urban green areas in the city. Furthermore the movement fights for the maintenance of public spaces in the city. It is considered that public spaces are a center where all social activities such as cultural, political and economic happen.

In other words, OPA wants to prove that great urban planning should be based on a participatory urban policy to improve the quality and quantity of public spaces in the city. It means that urban planning creates public space and facilitates social cohesion.

In 2015, to prevent the action of construction companies, OPA encouraged the occupation of the park by organizing cultural events to keep it occupied and ensure the transit of pedestrians inside the area surrounded by walls. Since then, demonstrations by OPA, local residents, users of the area and activists have increased, which call for the maintenance of the rare green area as the last permeable area in the region, and one of the few areas that still preserve native species of the Atlantic Forest, like we see in the Figure 2 below.

Presently, the park remains closed and the actors are waiting for the resolution of the case in court. Until the end of this paper, there was an audience of conciliation between the companies, the social movements and the city hall. The judge understood about the importance of the park to the city, because “São Paulo needs breath”. The action passed to the next phase: the trial process.

In the case of Augusta Park there are basically three big social actors: (a) social movements like OPA that represent the neighborhood’s residents, the users of the park and all people who want to enjoy more green areas in the city; (b) the owners of the space that represent the strength of real estate capital, the private interest of companies and the power of neoliberal exploitation of urban space; and (c) the government that is not motivated to enforce the law.

In consequence, this resistance symbolizes the political struggle, the fight against property speculation, against neoliberal urbanization. This area is a place of permanence and endurance; it is a place of emancipatory relations of population, a symbol of a new urban public life.

So, there is a clear relationship between the power struggles in the case of Augusta Park and the issue of urban planning and governance. This case demonstrates forms of resistance to the neoliberal urban model, guided in collective strategies as a political phenomenon.



FIGURE 2 Boy tries to see the Augusta Park after the gates were sealed.

The resistance translates in the mobilization and fight against the threat of destruction of public spaces in the neoliberal city. These collective strategies should be understood as a grassroots initiative that result from the collective construction of urban social movements and their actions.

As Margit Meyer<sup>29</sup> states, we are facing a new phase of urban social movements that have as a common base the plea for the right to the city<sup>30</sup>. Together with the right to the city accounts the potential to unify the diversity of urban quest improvement defying, therefore, neoliberal politics and practices. To the author, urban social movements are facing the neoliberal city and are mobilizing around two fault lines: the growth politics obsession and the entrepreneurial agenda guided by urban marketing/competition - leading to protest from those who do not fit in that way of thinking and doing city, and the neoliberal politics of social and labour issues - leading to the fight for preservation of welfare state and for social and environment justice. The movements challenging this neoliberal city are intensifying and acquiring global expressions and impact in the last decades<sup>31</sup>.

The case of study reflects the logic of real estate speculation in the city of São Paulo, which is a particular characteristic of the accelerated neoliberal urbanization process that devastates the capital city of São Paulo, most Brazilian cities and a lot of metropolis around the world.

Thus, we understand that neoliberal resistance is socio-spatial because the space is both strength of object and part of the political strategy. The political character of the neoliberal urbanism resistance is based on collective actions, such as the numerous mass protests in the streets and squares of Istanbul, the Arab countries, the United States and Brazil.

For example, in 2013, the Park Gezi in Istanbul was the catalyst of major protests in Turkey. These cases represent resistance processes between the irresponsibility of the government and the companies that insist on environmental failure of urban public policies based on unbridled neoliberalism<sup>32</sup>.

In a broader context, we realize the importance of discussion despite many differences with other cities and metropolis - starting from the differences between the places'/cities' urban scale and between the production processes and scenarios - a dialogue between them is possible and somehow enlightening. If the adverse effects of this process are global the resistance must also be global.

That model is based on the assumption of the phenomenon of global economy, financial globalization or even the "capital globalization"<sup>33</sup>. This shows us that the trend of urban planning is based on the dynamics of space production as a commodity subordinated to the logic of the globalized economy<sup>34</sup>.

In this sense, the real estate market assumes the marketing logic, as the power of volatile capital definitively modifies the constructed space<sup>35</sup> by transforming attributes into commodities. The city, as a commodity<sup>36</sup>, expresses the global interests of real estate capital that increasingly commercializes the space by reproducing segregation and fragmentation as characteristics inherent to that reality. In the process of neoliberal urbanization, the concept of the commodity city prevails, as it is owned by those who can pay for it, as in the mentioned case.

The process of neoliberal urbanization is based on an economic planning that strengthens the socio-spatial segregation and the inequalities in the urban environment through the overvaluation of land that exclusively satisfies the interests of real estate capital. Augusta Park is an example of this dynamics.

As such, the urban growth of the city of São Paulo is marked by the global capital that causes deep social and urban changes that result in uncontrolled and/or disorderly urbanization and make the city more vulnerable. The logic of the reproduction of space as a commodity, combined with the forces of the process of urban globalization, interferes with and influences the planning by projecting new forms of experiencing the city.

These circumstances have quickly changed the landscapes, the formation of cities and, primarily, given a new meaning to public spaces and eliminated the few urban green areas like Augusta Park. This situation, which is represented, among other factors, by the proliferation of gated communities, the hybridization of public and private spaces and an exclusive and non-inclusive urban area globalization, contributes to the increasing urban fragmentation that transforms cities.

Finally, it is in the public space that social networks and interactions among individuals are created to support rich and complex acts that feed the concept of urbanity<sup>37</sup>. In such spaces, we are able to exercise citizenship and enjoy the right to the city in a fairer and more equitable way.

While threatening the existence of public space, natural and urban environment and the memory and history of the city, this process provides for the creation of new spaces of resistance that fight in the face of the urban segregation caused by neoliberal urbanism, such as, for example, Augusta Park.



## CONCLUSION

This article was intended to show the real need for environmental protection in view of the tragic effects of the accelerated urbanization process in the city of São Paulo. To illustrate the discussion, we have presented the case of Augusta Park.

Firstly, we analyzed urban planning in the city of São Paulo throughout the twentieth century and we understand a clear relationship between public and private capital that has always built the city according to their interests in order to profit through real estate speculation.

Then we agree that the metropolis of São Paulo is currently a neoliberal city that prioritizes urban spaces privatized to the detriment of public spaces, and as an example, we analyzed the case of Augusta Park as a symbol of resistance to this new urbanism. So, it is clearly perceivable that the forces of market, capital and global economy mold the growth and development of the urban spaces of cities. This is the first evidence that the governance and private capital in Brazil do not prioritize democratic, participatory and emancipatory urban planning to improve the quality and quantity of public spaces in the city.

The case of Augusta Park showed that this process is clear, as it redefines the urban space through an economic planning in which the city is treated as a commodity and real estate speculation decides the way the soil is used and occupied. That neoliberal urbanism makes the materialization of sustainable urban planning difficult, as it wrecks the quality of life, without ensuring greater dignity to present and future generations.

In the case of Augusta Park the power struggles are divided into three actors: social movements; private capital and public capital. The latter two actors unite against the first to implement the neoliberal model of urban space exploration.

In consequence, the resistance symbolizes the political struggle, the fight against speculation, against the neoliberal urbanization. This area is a place of permanence and endurance; it is a place of emancipatory relations of population, a symbol of a new urban public life.

In response to the problems of this article, we understand that Augusta Park in its essence represents a space of resistance and of the fight against the ruthless consequences of the neoliberal urban model adopted in the city of São Paulo, driven by the private capital under the indifferent eyes of the public authorities.

Although it is still a private area, Augusta Park has a great symbolic, historical, cultural and environmental value for the city, there being countless reasons for it to remain open without private business ventures, to be fully considered as a public area for all inhabitants of the city. Augusta Park is a symbol of the fight against real estate speculation.

In urban space terrible losses are committed by construction companies with the connivance of the public authorities has an environmental, social, patrimonial and urban aspect. Damages caused by speculative exploitation of the landed estate affect the whole of society when the social function of the park is not achieved and private interest prevails over public interest.

Finally, we understand that the urban landscape of São Paulo has been quickly and intensively modified by the neoliberal practices of the market, consequently entailing great changes to the structure of the city and to the urban way of life by promoting the disintegration of the history and memory of the space, within which Augusta Park demonstrates itself to be a potential resistance to this neoliberal influence.

## Disclosure Statement

No potential conflict of interest was reported by the authors.

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- 2 Maria Adélia Aparecida de Souza, "A metrópole global? Refletindo sobre São Paulo", in *Metrópole e globalização. Conhecendo a cidade de São Paulo* (São Paulo: CEDESP, 1999).
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- 11 In 1970, the population of the city was approximately 5.925.000 (Five million nine hundred and twenty five thousand) inhabitants. It was a vertiginous population growth four times greater in only thirty years (SMDU, 2007), accessed May 23, 2016, [http://smdu.prefeitura.sp.gov.br/historico\\_demografico/tabelas/pop\\_brasil.php](http://smdu.prefeitura.sp.gov.br/historico_demografico/tabelas/pop_brasil.php).
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- 21 The Municipal Law No. 13.885 of 2004 establishes the use, division and occupation of soil in the city of São Paulo.

- 22 According to article 61 of PDE: “Article 61. Special Cultural Preservation Zones (ZEPEC) are parts of the territory intended for preservation, valuation and safeguard of historical, artistic, architectonic, archeological and landscape assets hereinafter referred to as cultural heritage, which may include constructed elements, buildings and their respective areas or plots; architectonic groups; urban or rural sites; archeological sites, indigenous areas, public spaces; religious temples, landscape elements; urban sets, spaces and structures supporting the immaterial heritage and/or uses of socially assigned value.”
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# TOWARDS A SUSTAINABLE PLAN FOR NEW TUBE HOUSES IN VIETNAM

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In Vietnam, the history of cities can easily be seen through their urban patterns, landscapes and housing typologies. Most recently, the economic reform in 1986 has resulted in huge impact on the Vietnamese society. The rapid economic growth and privatisation of the market has resulted in the appearance and significant development of the “new tube house” which soon became the most dominant housing type in Vietnam. Hanoi, the capital city of Vietnam, has a long history and also is very rich in architectural styles and typologies which are reflected in its urban pattern. However, there is no actual clear boundary in urban scale as the new tube houses are scattered all over the city and they are adapted differently to the contexts. This paper aims to investigate how the traditional urban tube houses in Hanoi transformed into the new tube house and, on the other hand, present the results of a survey conducted in Vietnam on how these houses respond to the Vietnam local climate and perform in terms of energy consumption.

#### **Keywords**

housing, energy efficiency, climate design, Vietnam, urban pattern

#### **How to Cite**

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## INTRODUCTION

Vietnam, a small country in Southeast Asia, has undergone a lot of changes in its history, which includes different wars against Eastern and Western invaders as well as the development of a socialist society. Governments in different periods had their own significant impact on the whole country both economic as well as social aspects. Architecture and urban planning are not an exception. In Vietnam, the histories of cities can easily be seen in their urban patterns, landscapes and housing typologies. Traditional Vietnamese architecture has been influenced by Chinese architecture which can clearly be seen from the pagodas, temples and the traditional tube houses in the ancient quarters. In the colonial period (1858 -1945), Vietnam adopted the French urban planning system and many French style buildings. After the colonial wars, many old apartment blocks were built, inspired by the Soviet Union in the early years of the Communist Era<sup>1</sup>. Most recently, the economic reform in 1986 called “Doi moi” has had a huge impact on Vietnamese society. The rapid economic growth and privatisation of the market has resulted in the appearance and significant development of the “new tube house” which soon became the most dominant housing type in Vietnam. The spontaneous development of this housing type helped to solve the housing shortage in the context of urbanization and modernization. In time, each housing typology evolved and adapted to societal changes aiming to meet the demand of housing quality and quantity.

Hanoi, the capital city of Vietnam, has a long history and is therefore very rich in architectural styles and typologies which are reflected in its urban pattern. There are various areas within the city that have distinctive characters. However, for new tube houses, there is no clear boundary in the urban scale as they are scattered all over the city and adapted differently in their contexts. Because of their dominance, regardless of their advantages and disadvantages, the new tube houses will continue to play a significant role in the near future. This paper investigates how the traditional urban tube houses in Hanoi transformed into the new tube house. The housing stock also needs to face the challenge of becoming sustainable, provide a healthy living environment and reduce its energy consumption. The responsibility lies not only in new buildings but also in the existing houses. Nevertheless, little is known whether this new urban housing typology, the new tube houses, offers adequate living conditions for the occupants and can adapt to climate change.

## METHODOLOGY

The urban planning does have a considerable influence on housing typology, characteristic and performance. On the other hand, as a dominant feature of the urban fabric, a change in housing type can have impact on the city level. Therefore, understanding the current condition of the housing stock, requirements of a sustainable home can help in forming a sustainable plan of a city. This study investigates the energy upgrade potential of contemporary new tube houses in Vietnam through refurbishment activities and hence the sustainable development of the city.

The first part of this study explores how houses have transformed through time and adapted to societal and economic changes in different historical periods. New tube houses are compared to the traditional ones to see how this specific typology has evolved.

The second part focused on how the new tube houses performed in term of indoor environment, energy performance and the potential to improve such performance through renovation. This part includes an interview .The interview has 3 main parts. The first section focuses on the household’s composition and housing character. In the second part, respondents were asked about their living experiences including indoor environment and energy consumption. The final section questioned the interviewees about their attitude and their refurbishment needs for sustainable housing. This interview did not intend to generalise the result for the whole tube house type but to provide general ideas to discuss and to support the implementation of the follow-up questionnaire. Due to this reason, there were no more than 12 interviewees that took part in this survey. The respondents were chosen in such a way that they maximise the variety in location, housing age and occupants’ background.

## HOUSING IN THE HANOI URBAN AREAS

Hanoi, the capital city of Vietnam consists of seven different architectural areas, see figure 1: (I) Imperial citadel; (II) Old quarter; (III) French quarter; (IV) Neighbourhood built before 1986; (V) Private housing built after 1986; (VI) New urban areas built recently and (VII) less urbanized areas<sup>2</sup>. Most of the areas are residential areas except for the Imperial citadel (I). It can easily be noted that Hanoi has expanded its urban city boundary considerably over time.



FIGURE 1 Different areas in Hanoi



FIGURE 2 Plan of the Old quarter in 1987 (left) and 2016 (right)

Until the late 19<sup>th</sup> century, the city of Hanoi was still ruled by the feudal empire. The city consisted of two main parts: the imperial citadel for the royal family and the old quarter for the citizens. The old quarter served as residential area as well as a place for the people to do business, trade the goods by the banks of the Red river. The old quarter streets were also known as the “36 streets of Hanoi” which represented 36 different administrative units called “Phuong”. The main streets were designed on the east-west axis that connects the citadel and the river bank in order to promote trade. The urban pattern of the Old quarter has not changed much since the late 19<sup>th</sup> century as illustrated in figure 2.

The housing type was the traditional tube house. The character of a traditional tube house included: very small front (2-4 meter) and a depth varying from 20 to 50-60 meter; in general 2 storeys high. Inner courtyards were employed to enhance daylight and natural ventilation and were used for outdoor activities. The front areas on the ground floor were used as shops. There are different explanations for the extremely narrow front of the traditional tube house. One of which is that it was the result of a division of inheritances. Another hypothesis proposed that the houses had initially been developed from the market stalls a long time before the streets came into existence<sup>3</sup>. Kien, in 2008<sup>4</sup>, stated that the narrow width was due to the act of the feudal government that taxed the households by their houses' front width. As the settlement increased in population, the houses extended inwards and formed the tube-like houses. The urban pattern of the Old quarter can still be recognised, nowadays. However, although most of the houses still retain their tube shape, not many of them are in their original form but have transformed into the new tube houses. Figure 3 below illustrates a traditional tube house in old quarter of Hanoi which retains parts of its in original form (the front two-storey blocks). The rear three-storey parts were renovated in 2003.



FIGURE 3 Traditional tube house. Number 47 Hang Bac Street, Hanoi

The French came into Vietnam in the late 19<sup>th</sup> century and they have had a huge impact on the Vietnamese society, including its urban form and architecture. During the French colonial years, the extension of Hanoi was well planned and built. French colonial buildings have various styles and were constructed at a large scale. The French colonial quarter brings to the city a unique landscape in Asia and great opportunities for developing tourism and business<sup>5</sup>. In the period of 60 years (1885-1945), two areas of the French quarter were built adjacent to the Old quarter. The first area is located to the west of the Old quarter which includes the area of the imperial citadel and its surrounding and the second area is located to the South of the Old quarter. The first urban plan of Hanoi was designed in 1900 by Henri Vildieu, then in 1924 by Ernest Hebrard, in 1934 by Louis-Georges Pineau and for the last time in 1943 by Henri Cerutti<sup>6</sup>. With the intention of transforming Hanoi into the centre of the Indochina peninsula, the French architects aimed to plan the city in a complete western style with a checker pattern wide streets and French style buildings. There were three main building types: the public office buildings for the French government, the villas for the French officers and the street houses for the Vietnamese officers<sup>7</sup> as shown in figure 4.

After the French colonial period, the Vietnamese socialist government was established. In the 31-year period from 1954 to 1985, housing policy did not allow privately owned houses in the North, including Hanoi. Houses were built by the government and distributed to the state employees in the cities with extremely low rent<sup>8</sup>. These state housing consisted mainly of 3 to 5-storey apartment blocks with communal kitchens and toilets. The government maintained a monopoly on urban planning and housing design in order to provide citizens with equal living conditions and avoid social differences<sup>9</sup>. However, these apartment blocks were claimed to be poorly maintained and provided little comfort and inadequate living conditions for the occupants<sup>10</sup>. Nowadays, these blocks still exist and have lots of problems such as illegal expansion, low living condition, lack of public spaces and so on<sup>11</sup>. Figure 5 illustrates the planning and current condition of the old apartment blocks in Kim Lien area, Hanoi.



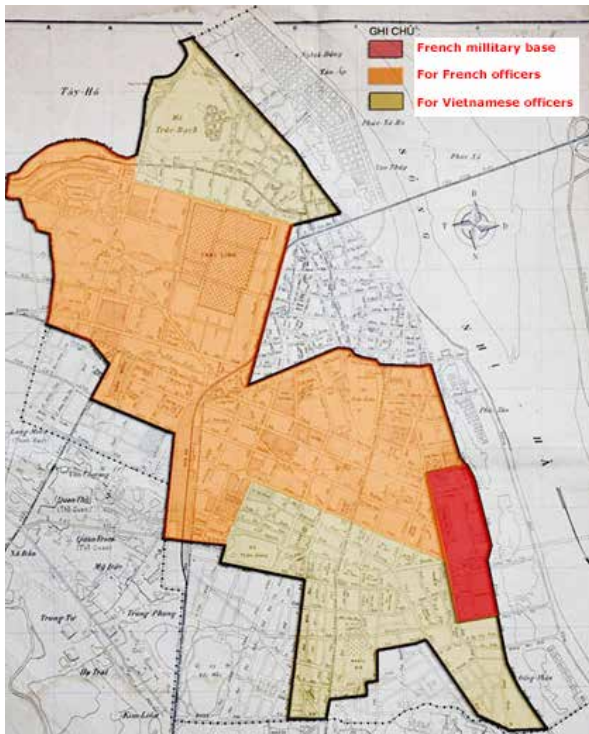


FIGURE 4 Plan of the French quarter

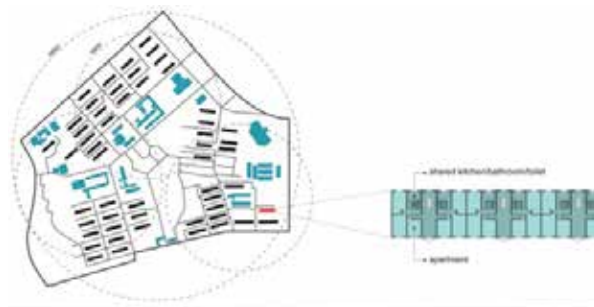


FIGURE 5 Apartment blocks in Kim Lien area, Hanoi

Most recently, the economic reform “Doi Moi” in 1986 has made considerable impact on the social and economic development of the cities. The privatisation of the market allowed people to do business, and especially buy and sell houses. People from the countryside migrated to the big cities to look for job opportunities and better social services. Big cities became more densely populated and a lot of pressure was put on the demand for quantitative and qualitative good housing. In order to adapt to the population boom, the number of available houses increased. The new tube house appeared and soon became the most dominant housing typology in Vietnam, accounting for about 75% of the total housing stock. Therefore, despite its advantages and disadvantages, this housing typology will continue to play significant role in the next few decades<sup>12</sup>.

A report of the national census and housing survey in 2009 indicated that there was a huge improvement in the housing supply due to the higher construction rate. However, the requirement of the housing demand in big cities was not yet met. As a result, it was more important to provide enough housing rather than providing better living condition in terms of indoor environment, health and safety<sup>13</sup>. On the other hand, the energy sector in Vietnam has to ensure an adequate energy supply and minimise energy-related environmental impact. According to the overview of the primary energy demand and supply balance for the 1997-2025 period, both policy makers and planners agree that energy demand will soon outweigh and even double the domestic supply by 2025<sup>14</sup>. Accounting for more than 31% of total energy consumption in 2012, the residential sector has been addressed as one of the most important sectors that can potentially reduce the total energy consumption in Vietnam<sup>15</sup>. In 2013, the Ministry of Construction has issued the National technical regulation on energy efficient buildings<sup>16</sup> (QC:09/2013/BXD) as an effort to improve the energy performance of the building sector. However, this regulation does not apply to small scale residential houses, such as the new tube houses. Hence, this paper aims to investigate the characteristics of row house, the most important housing typology, in terms of its environmental and energy performance. In order to support this contemporary housing type in its adaptation to reach a lower energy demand and an increased sustainability of the housing sector.

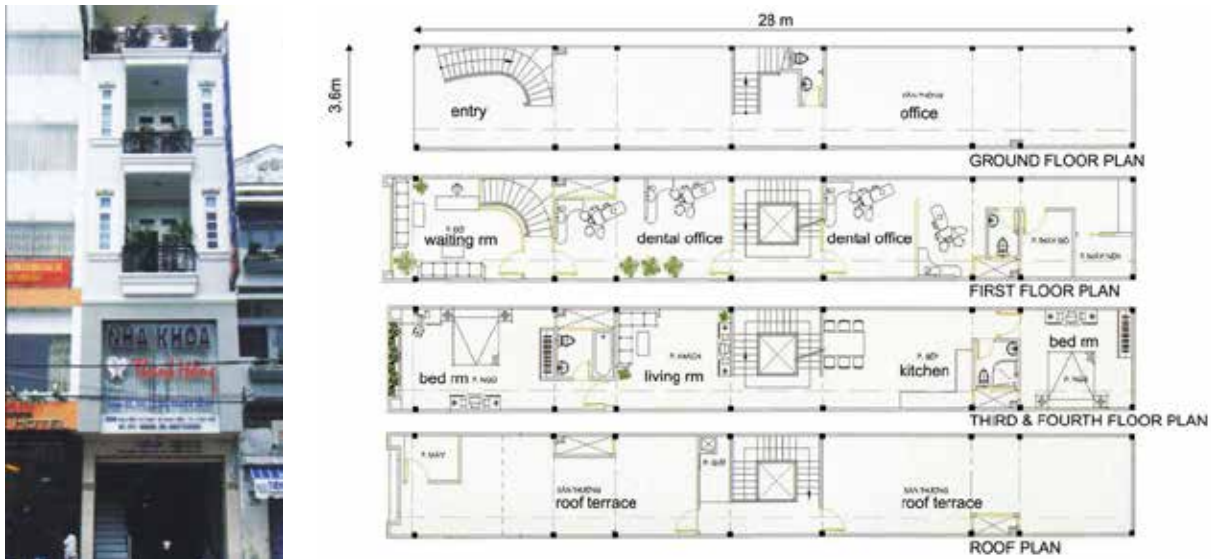


FIGURE 6 New tube house. House no. 138, Nguyen An Ninh street.

## TRADITIONAL TUBE HOUSE AND NEW TUBE HOUSE

The traditional tube houses have been studied by many researchers because of its historical value. Researchers investigated their history, urban planning, architecture, conservation methods, living experience of occupants and so on. On the contrary, the new tube houses did not attract attention of academic scholars until recently, when the question of sustainability arose.

In his study in 2008, Kien tried to compare several features of the traditional tube house and the new tube house as shown in table 1<sup>17</sup>.

	TYPE IDENTITY	TRADITIONAL TUBE HOUSE	NEW TUBE HOUSE
1	Construction period	16-19 Centuries	From late 1980s
2	Settlement pattern	Attached	Attached
3	Average plot size	3.5m x35m	4.5m x 20m
4	Tube-form layout	Yes	Yes
5	Tube-form façade	No	Yes
6	Front shop	Mostly yes	Mostly yes
7	Inner courtyard	Yes	Yes/No
8	Number of storey	1-2	3-5
9	Building materials	Ceramic roof tiles, wood beams, brick walls, plaster	Reinforced concrete bearing frame, brick walls, plaster
10	Number of households	Mostly multiple	Mostly single
11	Number of residents	Ca. 10	Ca. 3-7
12	Ownership	Multiple/single	Mostly single
13	Privacy	Little	Yes
14	Financing	Difficult	Convenient
15	Construction permit	Restricted	More freely

TABLE 1 Comparison of the traditional tube houses and the new tube houses

A new tube house layout is presented in figure 6. Compared to the traditional tube house, the new tube house has better privacy and is more convenient for financing and privatisation. However, the new tube house is not as sustainable as the traditional one. As the attached houses are generally designed by owners and builders but not by architects<sup>18</sup>, many times the owners and builders do not even follow urban regulations creating chaotic street façades and urban landscapes<sup>19</sup>. It is also noted that, due to the location and historical value in the Old quarter, construction, demolition or refurbishment process of the traditional tube houses is far more complex than that of the new tube houses.

## INTERVIEWEES' RESPONSES AND DISCUSSION

### HOUSING CHARACTERS

Results presented in this paper are taken from twelve interviews of people who are currently living in their own attached row house in Hanoi (except for interviewee 8 who lives in a shared rented house of college students). Among the twelve interviewees, four people's house were built 20-30 years ago, which is the first 10 years after the economic reform, four houses were built in the next 10-year period, and four were built within the last ten years. The broad range and equal distribution of housing age increased the responses' variety. The number of occupants living in each house ranges from one person to five persons (typical Vietnamese household composition of three generations living together in one house).

The average number of floors is four while according to the construction law, the maximum number of floors of a tube house is five. Vietnamese people tend to make the most of the land by building on the whole plot and maximise the number of floors. There are some common characters of the houses in terms of construction. The houses were all built with a reinforced concrete frame, as were the floor slabs and flat roofs. External walls are brick walls, thickness ranging from 110-200 millimetres, no insulation and the transparent windows are single glazed. Among the twelve responses, none of them indicated the existence of an inner courtyard. Only two houses, built the last five years, were recorded to have a light-well (interviewee 3 & 9). Recently built houses seem to be built with more consideration of the indoor environment.

### INDOOR ENVIRONMENT

Interviewees were asked about their living experiences and how they assess the indoor environment of the houses for the three aspects: daylighting, thermal comfort and natural ventilation (see table 2). It is remarked that most of the interviewees were quite satisfied and highly rated their housing performance in terms of daylighting and natural ventilation. It is even more surprising since inner courtyards were not reported to be inside those houses. Nine out of twelve interviewees' responses rate the daylighting as "good" or "very good". No bad experience was recorded and half of the responses indicate that natural ventilation is good. Only one interviewee reported bad natural ventilation in his house. However, since occupant's perception is very complicated and is difficult to measure, certain conclusion on the indoor environment quality of these houses requires more in-depth research. Initial attempts were made to try to understand this phenomenon. One of the explanations is that the houses have two openable façades to enhance daylighting and natural ventilation (interviewee 1,2,3,4,5,8 & 10). It is also important to note the role of urban planning and the surrounding areas. Many house are located in urban areas where streets are at least as wide as 11 metres (interviewee 1,2,3,4,5,9,10) and there are cases that houses are not obstructed for 50 metres (interview 6 & 11). Interviewee 7, whose house located in a small alley with only one openable façade, claimed indoor natural ventilation as bad.

It is more complicated when it comes to the thermal comfort aspect. Interviewees did not rate the thermal performance of their house as good as that of daylighting and natural ventilation. One third of the respondents said their houses were bad in maintaining its indoor temperature. Only two people gave a positive reply. According to the interviewees 1,8,9, the reason behind the poor performance is due to the orientation of the houses (West and South West). Interviewee 3 claimed thermal environment in his house is very bad and explained that because the adjacent houses were not built, his house is more exposed to the sun in summer while external walls are only 110 millimetres thick in order to maximize inner living spaces. Interview 4 noted that the thermal performance varied between different zones in the houses. The rooms which are located on the top floors are much hotter in summer and provide little comfort while the rooms which are closer to the ground are cooler and are regarded as better living spaces. On the other hand, interviewee 10, whose house also has the main façade face on the South West, rated his house as “good” in terms of offering thermal comfort. He stressed that the good outcome is thanks to the shading provided by the urban trees and the big apartment blocks located on the other side of the street during the hottest hours. In general, it is noted that house orientation and the exposed area to the sun are the two most important factors for the thermal performance of the houses.

INT. NO.	DAYLIGHT	THERMAL	NATURAL VENTILATION	ORIENTATION	SURROUNDING	EXT. WALL THICKNESS (MM)	WINDOW
1	Very good	Bad	Neutral	SW (-)	Wide street, 2 façade	110 (-)	Single glazed glass (-)
2	Good	Good	Good	NE	Wide street	220	2 layers, wood & glass
3	Very good	Very bad	Very good	NW	Wide street, adjacent houses not yet built (-)	110	Single glazed glass
4	Very good	Neutral	Neutral	NW	Wide street, 2 façade	220	Single glazed glass
5	Good	Good	Good	SW (-)	Wide street	220 (+)	Wooden (+)
6	Good	Neutral	Neutral	SE (+)	Wide street	110	Single glazed glass
7	Neutral	Neutral	Bad	NE	Small alley (-)	220	2 layers, wood & glass
8	Good	Bad	Good	W (-)	Wide street	220	2 layers, wood & glass
9	Good	Bad	Good	SW (-)	Wide street, adjacent houses not yet built (-)	220	Single glazed glass
10	Neutral	Good	Neutral	SW (-)	Wide street, shaded all the time (+)	220	Single glazed glass
11	Good	Neutral	Good	SE (+)	Wide street	220	Single glazed glass
12	Neutral	Good	Neutral	SW (-)	Small alley, more shade (+)	110	Single glazed glass

TABLE 2 Summary of indoor environment assessment and housing characteristics  
 (-): Housing characteristic that has a negative influence on the indoor environment  
 (+): Housing characteristic that has a positive influence on the indoor environment

## ENERGY CONSUMPTION

Electricity is the primary energy as recorded in all 12 houses while half of the people still used gas as fuel for cooking. Respondents also claimed that they had changed or they wanted to switch from using gas to electricity for cooking because of safety reasons. The main equipment that consumes a large amount of energy are the air-conditioner and the electrical water heater which appear in all twelve interviewees' houses. There are three houses that have a solar hot water system and that system was claimed to successfully provide hot water over the majority of the year and only during a short time in winter; an auxiliary electrical water heater is needed. All the responses indicate a careful use of electricity to save energy but eight of the interviewees still think they have to spend too much money on energy. Interviewee 1,3,4 noted that they have spent a lot more energy than usual for air-conditioning to keep the indoor temperature stable because of their small babies. It is important to remark that energy consumption also largely depends on the lifestyle, special needs of each household.

## HOUSING REFURBISHMENT

Apart from the four interviewees who just recently built their houses, only three persons had their houses refurbished in the last 10 years, the rest did not renovated houses or just had small maintenance or redecoration. Details of three refurbishment cases were summarised in table 3 where the owners shared the same reason that their family were expecting new member(s) (marriage or having babies) so they needed extra space and better living conditions. Interviewee 1 stated shading devices were added to the house south west façade as an effort to prevent overheating in summer. Interviewee 5 installed a new solar hot water system in his house during an intensive refurbishment in 2015. Both of the above refurbishment cases claimed to work well. Interviewee 12 also had a major refurbishment in 2010 when adding a whole new floor on top of the old house. As this led to more rooms, he was also happy with the better thermal performance of the house but he claimed that the daylight was worse. From these 12 cases, the main reason for intensive renovation was to expand living spaces. This fact raised the possibility to upgrade energy performance through refurbishment activities.

INT.NO.	YEAR OF REF.	REASON FOR REF.	MAJOR WORK OF REFURBISHMENT	EFFECTS	COST (EURO)
1	2014	Moving in vacant space Need better environment for baby	Add shading device Add facilities (air-conditioner, electric water boiler) Add extra spaces (toilet & storage)	Better thermal performance Less glare issue from SW windows	4,000
5	2015	Repair major damage	Add solar hot water system Re-equip service system (electric and plumbing network) Add air-conditioner Repair damage in floor and walls	Saving energy for water heater Eliminate leakage in floor and walls	15,000
12	2010	Need more spaces for new family member (marriage)	Add a whole new floor	More living spaces Better thermal performance Less daylight	N/A

TABLE 3 Summary of major refurbishment activities in last 10 years

When asked about priority in the refurbishment decisions, respondents indicated that the most important factor was to improve the indoor environment. Half of the responses put that factor on top and four others chose it to be the second priority. While other categories varied among the responses, energy consumption did not attract people's attention, ten people said it was their least priority when considering a refurbishment decision. In general, although energy efficiency is not one of the priorities of the occupants, there is still a chance that houses can reduce a considerable amount of energy consumption because improving the indoor environment is still the most important refurbishment need.

## CONCLUSION

The history of Vietnam had a lot of effect on urban planning and architecture in cities of Vietnam and in Hanoi in particular. Urban areas and their housing types reflect the character and ideology of the various periods. Urban houses themselves have their own distinctive character in the different historical periods and adapt, again, to the contemporary challenges. Most recently, the economic reform of 1986 started the introduction of the "new tube houses" which then became the most dominant housing type in the whole country, accounting for about 75% of the total housing stock<sup>20</sup>. Therefore, the existing "new tube houses" have an important role in planning more sustainable housing and energy preservation. A recent survey, conducted in March 2016 in Hanoi, investigated the new tube houses' character and their potential for energy upgrade. The results indicate that the thermal performance of a third of the existing houses is unsatisfactory and people state that they spend a lot of energy on cooling and heating the spaces. Although the Vietnamese occupants do not include the energy upgrade in their refurbishment priority list, there are still chances to reduce the environmental impact of the current housing stock. The most important factor for a refurbishment plan is an improvement in the indoor environmental quality which, with a little incentive, could be combined with measures that also reduce the energy demand. A follow-up questionnaire on a larger scale is planned to get more insights.

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Table 1: To K., "Tube House and Neo Tube House in Hanoi: A comparative study on Identity and Typology". *Journal of Asian Architecture and Building Engineering (JAABE)* 7 (2008): 255-262.

Table 2: Phan Anh Nguyen.

Table 3: Phan Anh Nguyen.



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# Land Use and New Planning Ideas

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Chair: Maciej Motak



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# PATRICK GEDDES AS SOCIAL- ECOLOGIST: A CENTURY OF MAPPING UNDERUSED SPACES IN DUBLIN

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The emergent discourse on urban resilience can be considered a response to the rapid pace of change and severe challenges facing urban areas. Urban resilience is understood as the application of social-ecological systems thinking to the city, and this paper reports on research that places the discourse in a continuum of urban planning theory and practice stretching back to the early years of the town planning movement that was carried out as part of the EU FP7 TURAS project (Transitioning to Urban Resilience and Sustainability) (2011-2016). We explore the mapping of underused spaces as an example of urban resilience in practice by establishing links between urban resilience and key aspects of the theory and practice of Patrick Geddes (1854-1932); the re-examination of a map showing vacant sites in Dublin from 1914 influenced by Geddes; and the review of an online civic engagement platform called 'Re-Using Dublin', which facilitates the mapping of underused spaces in a participatory civic survey process. The paper seeks to illustrate that Geddesian ideas on vacant sites as a resource for alternative uses and civic engagement through the practice of surveying, are still very relevant and informing new experimental practices in Dublin.

#### **Keywords**

mapping, Patrick Geddes, Reusing Dublin, social-ecological systems, TURAS, underused spaces, urban resilience, vacant sites

#### **How to Cite**

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## INTRODUCTION

The EU FP7 TURAS project (Transitioning to Urban Resilience and Sustainability) seeks new adaptive and flexible approaches to urban planning and governance that can build social-ecological resilience in response to the convergence of crises such as climate change, natural resources shortages and stressed ecosystem services. Urban resilience is understood as the application of social-ecological resilience thinking to urban planning and policy in order to provide innovative approaches to urban problem solving. It is observed that there are few explicit examples of what urban resilience means in practice in the literature.<sup>1</sup>

The TURAS research reported here has a specific focus on underused spaces, which are considered to present opportunities for a city to reinvent itself.<sup>2</sup> The mapping of these underused spaces is put forward as an example of an adaptive and flexible approach to urban planning. This paper explores this practice by first establishing links between key aspects of the urban resilience discourse and the theory and practice of Patrick Geddes (1854-1932), before re-examining a map showing vacant sites in Dublin from 1914 influenced by Patrick Geddes. The paper then reviews a contemporary crowd-sourced web-mapping application, 'Reusing Dublin', developed by the TURAS Project. Discussion and conclusions sections assess what insights for urban resilience emerge from this research.

## PATRICK GEDDES AS SOCIAL-ECOLOGIST

Patrick Geddes was a generalist thinker who is attributed such a broad range of expertise, including botanist, sociologist and town planner, that Lewis Mumford suggested "one might get the impression that Professor Geddes is a vigorous institution, rather than a man".<sup>3</sup> This paper explores the idea that Patrick Geddes applied social-ecological resilience thinking to cities over a century ago and that a re-examination of his theory and work may provide insight into the contemporary concept of urban resilience and what it means in practice. In this section, parallels are drawn between three key aspects of the urban resilience discourse and the theory and practice of Patrick Geddes.

## THE HUMANITY-NATURE RELATIONSHIP

The contemporary multi-disciplinary field of social-ecological resilience thinking acknowledges that ecological systems and social systems are interdependent.<sup>4</sup> Social-ecological resilience refers to the adaptive capacity of a system to respond to change from internal or external processes and still maintain essential functions.<sup>5</sup> This replaces a deterministic conception of nature, science and ecology where man could control and repair the environment through science and technology.<sup>6</sup> In social-ecological resilience thinking, complex urban systems are understood to share many of the characteristics of ecological systems<sup>7</sup> and cities are viewed as metropolitan ecosystems that are part of nature.<sup>8</sup>

Parallels can be drawn with Geddesian thinking, which clearly articulates an understanding of the interdependent relationships within and between ecosystems and social systems. Patrick Geddes might therefore be described today as a pioneer of social-ecology. Geddes gave a lecture in 1919 in which he stated: "By leaves we live. Some people have strange ideas that they live by money. They think energy is generated by the circulation of coins. Whereas the world is mainly a leaf-colony, growing on and forming a leafy soil, not a mere mineral mass: and we live not by the jingling of coins, but by the fullness of our harvests."<sup>9</sup> Geddes linked humanity and nature in his "folk-work-place" paradigm, which was an adaptation of the triad "lieu, travail, famille" from the social philosophy of Frederic LePlay (1806-1882).<sup>10</sup> Geddes's concept of "natural occupations" represented how humanity adapts to nature through "work" and he considered the ultimate expression of the relationship between humanity and nature to be the city in its region:<sup>11</sup> "Like the living being it is, a city reacts upon its environment."<sup>12</sup>

## CITY IN TRANSITION

In the social-ecological resilience discourse cities are considered complex self-organising systems<sup>13</sup> and there is an emphasis on the observation and understanding of processes, cycles<sup>14</sup> and social learning.<sup>15</sup> The aim is to make the transition from urbanization as a destructive process to one that is sustainable and resilient.<sup>16</sup> The meaning of the word “social” is expanded to embrace cultural, political, economic, and technological systems<sup>17</sup> and the aim is to create healthier, happier lives through a sustainable and mutually beneficial balance in the humanity-nature relationship.

These ideas are echoed in Geddesian thinking, where the city was viewed as a socio-spatial system for human life and great emphasis was placed on observation and the need to understand the past in order to interpret the present and plan for the future. Geddes saw the industrial city at that time as being in a transition from an inefficient and crude “paleotechnic order” that was “dissipating resources and energies”,<sup>18</sup> towards his vision of a future efficient “neotechnic city” with “a more subtle and more economic mastery of natural energies”<sup>19</sup> that achieves a sustainable balance in the humanity-nature relationship. Geddes highlighted the need to transform the prevailing definition of progress “from an individual Race for Wealth into a Social Crusade of Culture”,<sup>20</sup> moving beyond mere spatial planning to cultural evolution directed towards making the earth a better place to inhabit.<sup>21</sup>

## COMMUNITY CAPITAL

In the urban resilience discourse, community capital is considered key to building adaptive capacity to disturbance in an uncertain future. Adaptive capacity is reliant on cohesion and mechanisms for action in communities, which are recognized as social systems in transition that are impacted by internally and externally driven forces.<sup>22</sup> Actions affecting resilience can be most tangible at the community level.<sup>23</sup>

Urban resilience is operationalized through the process of adaptive co-management.<sup>24</sup> Adaptive co-management is reliant on social memory, which is informed by past and present learning through shadow networks, influencing what precautionary or mitigating actions are taken, and the ability to adapt to change.<sup>25</sup> The process of adaptive co-management creates the potential for collaboration between citizens and government, the transfer of knowledge, and identification of new solutions.<sup>26</sup> Adaptive co-management has a strong focus on community participation and social equity,<sup>27</sup> recognising that people have knowledge of systems and their own actions, and setting up a “mutually respectful dialogue”.<sup>28</sup> In the urban resilience discourse there is therefore a recognition that people and attachment to place are key to delivering real change.<sup>29</sup>

In order to realise the transition to the future city Geddes also considered it essential to engage all citizens with the past and present of their place and one another so that they might share knowledge and self-organise: “...in all cities we talk about work-people and the submerged tenth as if they were mere passive creatures to be housed like cattle. We shall never do anything in that way. We must take them with us, and we must realize that we are working for the civic uplifting.”<sup>30</sup>

Geographical local knowledge was considered a key aspect of citizenship that would lead to local attachment and belonging. Geddes believed that by understanding the local it would be possible to comprehend global issues and make local actions relevant<sup>31</sup> and that change would result from the aggregation of local efforts, “city by city, region by region”.<sup>32</sup> However, he noted that citizens were ‘half-blind’ to the city and its history<sup>33</sup> and set out to address this through two strategies that used geographical local knowledge as a mechanism for civic engagement: the civic museum and civic survey. The strategies were to prompt an “arousal of civic feeling, and the corresponding awakening of more enlightened and more generous citizenship.”<sup>34</sup> It is suggested here that “generous citizenship” was the Geddesian equivalent of “community capital”.

## PATRICK GEDDES AND THE DUBLIN INQUIRY MAP (1914)

Geddes's civic museum idea evolved into the touring Cities and Town Planning Exhibition, documenting the origins and development of urban civilizations through drawings, illustrations and models in an "encyclopaedic meta-view of all available knowledge".<sup>35</sup> The civic survey was to be realised through a multidisciplinary and interactive process that ideally involved the entire community in understanding all aspects of the city and its drivers of change over time.<sup>36</sup> The survey was to provide a "diagnosis before treatment"<sup>37</sup> in order to avoid "designs which the coming generation may deplore".<sup>38</sup>

The "Survey of Edinburgh" was the exemplar civic survey. Vacant sites were considered a resource for alternative uses and when the Cities and Town Planning Exhibition first visited Dublin in 1911 it included a plan of the Old Town of Edinburgh identifying 75 existing and potential open spaces for playgrounds and urban agriculture from 1908, and a plan of the entire city entitled 'Directory Map – Vacant Lands' showing "that 450 unused acres might be utilized"<sup>39</sup> from 1910 (Figure. 1). Both are attributed to Geddes's "Outlook Tower Open Spaces Committee", and the latter map specifically acknowledges the contribution of Mr Joseph Fels (1853-1914) from Philadelphia, a soap millionaire, philanthropist, and supporter of the single-tax on land value as proposed by Henry George (1839-1897).<sup>40</sup> This collaboration confirms that Geddes was very much engaged with proposals for land reform that promoted the productive and optimal use of land as a means to address the poverty and social injustice of the industrial city,<sup>41</sup> and perhaps suggests that the map was to communicate how much land was not productively in use in a synoptic and visual format.

Fels was also founder of the Philadelphia Vacant Lots Cultivation Association and observed the environmental and social benefits of urban agriculture: "A large number of vacant, unsightly spaces became attractive centres of local interest and activity, the public became interested in thrift and co-operation".<sup>42</sup> These ideas would have resonated with Geddes, who saw gardening as a core activity for cultural evolution that engaged citizens in "vigorous health and activity, guided by vivid intelligence".<sup>43</sup> Geddes and Fels corresponded regularly on their shared interests and it is also possible that the 450 acres in Edinburgh were identified for urban agriculture uses. Geddes had already been involved in developing numerous community gardens on vacant sites in Edinburgh, many of which can still be visited today.<sup>44</sup>

In Dublin, Geddes and his daughter Norah worked with the Women's National Health Association (WNHA) on the reuse of vacant spaces as gardens and playgrounds. The WNHA aimed to transform "derelict spaces into centres of brightness and happiness" throughout the island.<sup>45</sup>

The influence of the Edinburgh maps can clearly be seen in a subsequent plan of Dublin, published in 1914 in the appendix to the report of the 1913 inquiry into The Housing Conditions of the Working Classes in the City of Dublin. The Dublin Inquiry Map (1914) locates a total of 1,359 derelict sites and buildings across the city (Figure 2) and provides an informed basis for strategic planning to address a severe housing crisis, identifying numerous layers of information such as "Derelict Sites", "Land available for building", "Insanitary areas", "Areas for which schemes are in preparation" and "Dangerous Buildings",<sup>46</sup> all illustrated in one singular synoptic view.

Geddes's evidence to the Inquiry records that he considered the derelict spaces an opportunity for improving the health of citizens and for giving communities agency to look after their own local environment: "there is not sufficient recognition given to the fact that the people themselves are quite desirous of carrying out the improvements".<sup>47</sup> Geddes notes the sites were ideal for urban agriculture, and suggested all vacant land be reclaimed "in the public interest" and allocated amongst the poorer classes in order to create a level of income and nutrition.<sup>48</sup> This proposal would appear to reflect Henry George's ideas that land belonged to the people by natural right, and that inequality in the distribution of wealth was core to social and environmental problems.<sup>49</sup> Mr E.A. Aston, a founder member of the Housing and Town Planning Association of Ireland, advocates in his evidence for

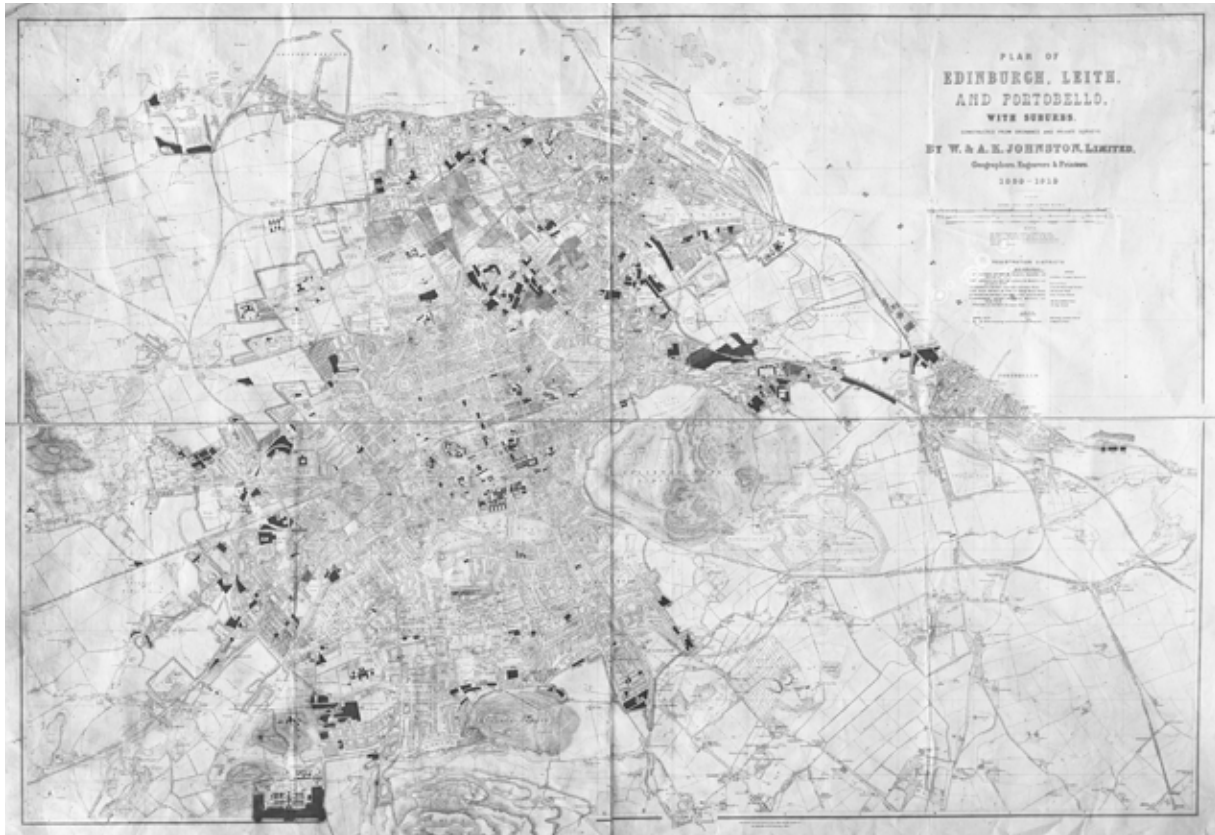


FIGURE 1 Map of derelict sites in Edinburgh, 1910. University of Edinburgh, Centre for Research Collections: Patrick Geddes Collection, Volume II, A2

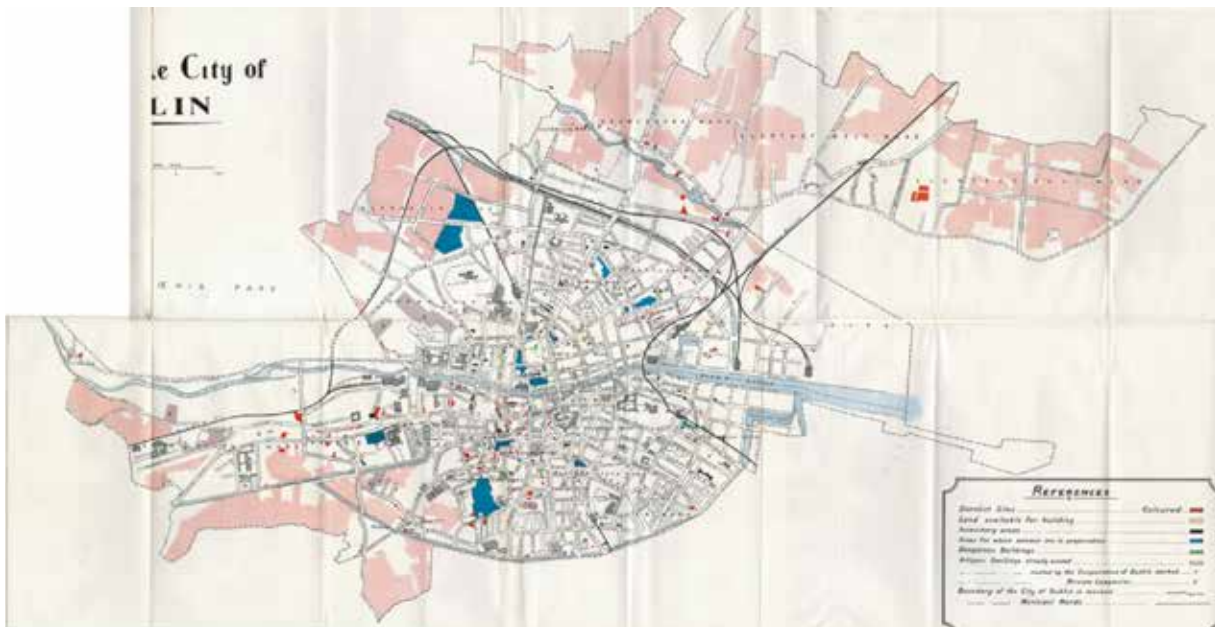


FIGURE 2 The Dublin Inquiry Map. Report of the Dept. Committee appointed 'to Inquiry into the Housing Conditions of the Working Class in the City of Dublin, Cd.7317, Dublin, 1914, between 324 and 325.

a tax on derelict sites to encourage their use, and compulsory purchase powers for Local Authorities on sites that have remained vacant for over two years.<sup>50</sup> Again, these ideas reflect the discourse on land reform at that time, such as the Liberal Party's proposed tax on the capital value of undeveloped land.<sup>51</sup>

The Dublin Inquiry Map (1914) was therefore a management tool for the remediation of the city, diagnosed through the surveying process, that had the potential to support a number of activities including the strategic planning of a transformation of housing provision and the administration of a tax on land values or status. However, there is no indication that this map was generated through the type of dynamic and participatory process envisioned by Geddes in his writings on the civic survey.

## **“VACANT AND UNDERUTILIZED SITES” MAP (2013) AND “REUSING DUBLIN”**

A century later and Dublin is still characterized by vacant sites and buildings,<sup>52</sup> there is a housing crisis in the private rented and social sectors,<sup>53</sup> and there is a lack of green space in the city centre.<sup>54</sup>

In 2013, as if to commemorate the centenary of Mr E.A. Aston's evidence to the 1913 inquiry, the Lord Mayor of Dublin proposed a vacant land levy for the city. Motivations originate from a recognition that existing tax mechanisms on property in the city effectively encourage vacancy and the incapacitation of buildings, and an understanding that the hoarding of vacant land was a contributing factor to the property boom as it led to a false impression of scarcity, artificially driving up prices.<sup>55</sup> The aim of the levy is to induce behavioural change, optimize the productive use of city land, and reduce urban sprawl.<sup>56</sup>

Dublin City Council mapped “Vacant and underutilised sites” in a limited area enclosed by the city's canals to provide an evidence base for the levy, and to develop new techniques of mapping and monitoring the sites.<sup>57</sup> The map uses three categories that target sites that currently are not subject to any tax regime: a site that is totally clear of structures; vacant land with dilapidated buildings; a site comprising mainly of a dilapidated building or buildings that are likely to be incapable of occupation (Figure 3). The map was based on visual assessment in the field by planners who then collected information in relation to ownership, building condition, impediments to redevelopment etc.. This was then inputted into the Council's internal GIS system.

The process of vacant sites mapping can present significant challenges not least from the scale of areas involved<sup>58</sup> and the fluidity of data.<sup>59</sup> Dublin City Council experienced many challenges, particularly in relation to the accumulation, validation, maintenance and accessibility of data that McPhearson et al. suggest can often be addressed by local community participation.<sup>60</sup> This process of ‘volunteered geographic information’ (VGI) can reduce dependence on data from government, and provide more relevant and insightful information as local stakeholders will often have a more intimate knowledge of neighbourhood conditions than planners working with city government.<sup>61</sup>

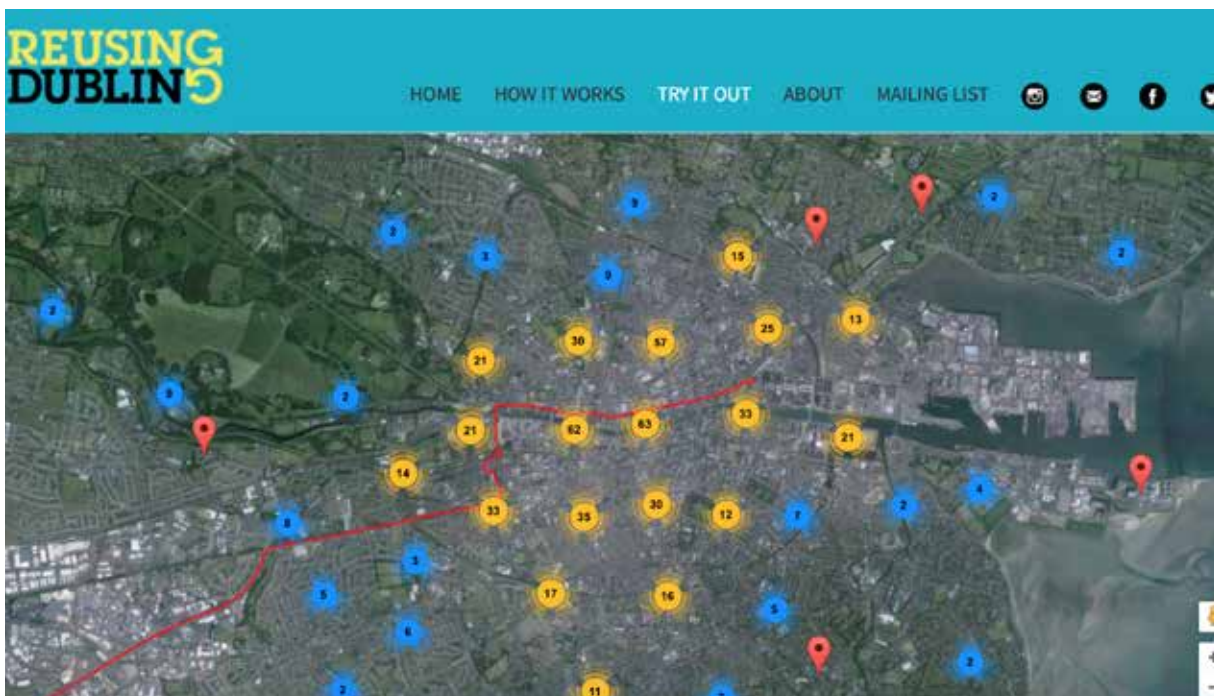
The TURAS project is exploring these ideas through a web-GIS application called ‘Reusing Dublin’ that is based on an evolving map recording spaces that are not used at all (vacant spaces); are only partly in use (for example upper floors above shops); or that could accommodate additional uses (for example roofs, walls or grassed areas) such as energy creation or growing plants for biodiversity. The project therefore aims to obtain a finer grain of information by mapping ‘underuse’ as opposed to simply ‘vacant’ (Figure 4).

Underused spaces are identified through student research projects; existing datasets such as commercial property valuation records and the Planning Registry; and crowd-sourcing, drawing on the dispersed and often tacit knowledge within communities. Users can add markers to identify underused spaces they know of, discover and share information (such as photographs and historical or ecological data), and connect with others in relation to any particular space.





FIGURE 3 Map 11 from the Vacant Land Study. Report of the Strategic Policy Committee, Planning and International Relations. Dublin City Council, 03 March 2015.



Reusing Dublin therefore aims to engage citizens with their place and one another through local community participation and geographical local knowledge. It is hoped that a network of underused spaces is revealed that forms an opportunity landscape for a broad range of actions that might be related to community uses, ecosystems services, food systems, energy systems, or intensification of use.

Early results indicate that Reusing Dublin has tapped into the considerable interest around underused spaces for temporary or more permanent cultural and ecological uses in the city. This is primarily evident in activity on social media such as facebook, twitter and instagram.<sup>62</sup> Events such as a re-'cycling' tour of underused spaces and a 'site of the week' have generated interest and successfully engaged stakeholders related to particular sites. However, active crowd sourced engagement such as adding sites or information is still very limited. At the time of writing only about 10% of the 660 identified sites have been crowd-sourced. There is evidently a requirement for resources to curate and manage the website and associated social media, and to engage directly and actively with stakeholders and citizens.

## DISCUSSION

Geddesian theory and practice have been shown to relate to the emerging discourse on urban resilience. It is suggested here that Geddes's practice of mapping underused spaces is an example of urban resilience in practice and that a re-examination of the Dublin Inquiry Map (1914) provides a number of insights for the contemporary mapping of vacant sites in Dublin, as the 2013 map falls short of the more generous and imaginative social-ecological ideas espoused by Geddes. For example, to Geddes such a map was not simply an inventory for tax collection but a strategic tool to manage a severe housing crisis. Building development was not the sole aim as the sites were considered opportunities for addressing multiple challenges that in the present day could be related to food and energy systems, biodiversity, and ecosystems services, in addition to housing. The civic survey was not a remote exercise by planning officials but an open and participatory process where data is continuously gathered by citizens. And critically, the 1914 map is not restricted to a central area and integrates multiple layers of survey information to provide a synoptic view. In systems thinking, a synoptic approach facilitates an understanding of whole systems and their component and interrelated parts, providing a basis for considering effective and creative change.<sup>63</sup>

Reusing Dublin attempts to address these deficiencies and can be seen to reflect Geddesian thinking in a number of ways. The website engages citizens with local issues that can connect them with their place and one another, and through systems thinking, with global issues. The aggregation of data on underused spaces reveals an opportunity landscape for the remediation of the city in much the same way as the civic survey was a pre-requisite to future planning. In addition, the aim of helping citizens self-organise reflects Geddes's observation that communities should be given agency to look after their own local environment.

Both Geddesian thinking and Reusing Dublin represent a move away from the heroic modernist masterplanner to a future where decision-makers and planners facilitate citizens in making direct contributions to data collection in a variety of areas<sup>64</sup> in a 'bottom-up advocacy process' that can support environmental recovery in an uncertain future.<sup>65</sup> Parallels can be drawn with many aspects of social ecological resilience thinking, such as combining different types of knowledge for learning, experimentation, assuming change and uncertainty, and creating opportunities for self-organisation.<sup>66</sup>

## CONCLUSIONS

The re-examination of the work of Patrick Geddes illustrates that many of today's challenges, conditions and solutions are not entirely new, and that Geddesian thinking can provide insights for contemporary practice. The mapping of underused spaces is an adaptive and flexible approach to urban planning and governance. Information can be presented in a synoptic view and with other relevant layers of information in order to reveal connections and empower citizens to identify opportunities and self-organise, building adaptive capacity to change in an uncertain future. Geddesian thinking has been shown to have influenced the development of a crowd-sourced webmapping application, Reusing Dublin, that aims to address many of the challenges of mapping underused spaces through an open and participatory process that respects local knowledge and engages citizens with local issues. The resulting map of underused spaces can provide a template for change within which communities can precipitate social-ecological innovation, and therefore contribute to the transition to urban resilience and sustainability. The mapping of underused spaces provides an explicit example of what urban resilience means in practice.

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I confirm that this manuscript has not been published elsewhere. There is no potential conflict of interest with this submission.

## Notes on contributor

Philip Crowe is an architect, urban designer and PhD candidate in University College Dublin, School of Architecture, Planning and Environmental Policy. Philip's PhD research is funded by the EU FP7 TURAS project (Transitioning towards Urban Resilience and Sustainability) and examines the theories and output of Patrick Geddes (1854-1932), particularly in relation to Dublin, as a setting out point for considering the potential impact of social-ecological resilience thinking on the city today.

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# EBENEZER HOWARD'S IDEAS IN RELATION TO THE PLANNING OF KRAKOW: A SHORT HISTORY

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In 1912, Krakow received a visit from Ebenezer Howard, whose garden city concept had been familiar to architects and planners in Poland right from its inception in 1898. Here he delivered a lecture in which he declared that “Krakow [was] a garden city from natural growth.” Howard’s garden city concept had a certain impact on Krakow urban development and typical examples of this approach from different periods are discussed in this paper. Relatively small-scale examples of this approach were in fact already in existence prior to his visit, such as the Salwator housing project (1908) and the Kobierzyn psychiatric hospital (1909). Ebenezer Howard’s influence may also be seen in the large-scale Greater Krakow plan for the development of the newly extended city (1909) and in plans for several Officer Neighbourhoods (1924), and even a district planned during the Nazi occupation (1940) reveals a certain indirect influence. The final and largest example is to be found in the planned “Socialist” city of Nowa Huta (1949), which was firmly related to the concept of the neighbourhood unit and thus indirectly to that of the garden city as well. With time, the influence of the garden city approach weakened, and examples both in range and numerically were limited. It should be noted that the popularity of Howard’s concept did not necessarily mean that his original views were shared; and equally, that the notion of the garden city itself also continued to evolve.

## **Keywords**

garden city, garden suburb, Krakow, Ebenezer Howard, planning

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## INTRODUCTION: THE BEGINNING OF THE RELATION BETWEEN EBENEZER HOWARD AND KRAKOW

Ebenezer Howard was neither a professional planner nor an architect. His name, however, is one of the most illustrious in the field of planning and, more generally speaking, in shaping the structure and image of contemporary cities. The garden city notion, as well as related notions such as the garden suburb, have been used, or sometimes misused, in relation to numerous built and unbuilt projects, in countless quotations and references, in advertisements, and in other ways.

Among the journeys Ebenezer Howard undertook, two were especially significant. The first was his long stay in the United States from 1871 to 1875, which included working on a Nebraska farm and living in Olmsted-time Chicago. The second was a short trip made with a large group of people to Letchworth on October 9<sup>th</sup>, 1903 in order to inaugurate the construction of the first ever garden city. From the Polish perspective, the visit he made to Krakow also merits some attention.

This took place in August 1912, and the main and official reason for his visit was his attendance at the 8<sup>th</sup> World Esperanto Congress, an annual event, which was being held in Krakow that year. Upon his arrival, he was mentioned and welcomed in the local press<sup>1</sup> – it was not uncommon at the time to announce the names of guests arriving in the city<sup>2</sup>. He was referred to as “the author of the Garden City” and “distinguished English architect” rather than as a “stenographer from Letchworth” as registered in the Congress annals<sup>3</sup>. He participated actively in this event and on August 14<sup>th</sup> delivered a lecture in Esperanto, which was simultaneously interpreted into Polish. As an Esperanto enthusiast, Howard was also interested in spreading his garden city idea to a large group of those potentially interested (the congress was attended by ca. 1,000 participants).

His relatively brief visit to the city occurred at a very special time and allowed him to witness events of various kinds, including an Exhibition of Architecture and Interiors within Garden Surroundings, which had opened earlier that year<sup>4</sup>. In 1912 Krakow was also undergoing an eight-fold enlargement, begun in 1909, with a completion date of 1915. The notion of Greater Krakow was then coming into use, and this was later adopted by Greater Warsaw (1916) and Greater Lviv (1920). By going on walks Howard gained some site orientation in Krakow with regards to the topographical context of both the densely built-up city and its almost empty former suburbs, which had recently become incorporated. He also became aware of current planning perspectives by studying the Plan of Greater Krakow, a regulation plan of the extended city.

During the Krakow lecture and following discussion, Howard made some comments on Krakow’s existing plan and its further urban development. Alongside his many accurate remarks, were comments which appear to have contradicted the basic principles of his own theory<sup>5</sup>, but maybe he made these with the intention of complimenting the Congress’s host city. The most characteristic of these dealt with both Krakow and garden city theory, calling Krakow “a garden city from natural growth” or “a garden city naturally developed.” Of course, this was quoted proudly in Poland at the time, as continued to be decades later<sup>6</sup>.

After Howard’s visit to the city, Krakow faced a number of historic events and challenges: the outbreak of World War I and short siege by the Russian army (1914), the end of World War I and the regaining of Poland’s independence (1918), the outbreak of World War II and Nazi occupation (1939), the end of World War II and the introduction of the Communist system in Poland (1945), and finally the restoration of democracy and the launch of the free market (1989). During this period, key urban decisions were taken and new milestones added to Krakow’s thousand-year history, which resulted in the adoption of new urban forms and heritage, including the construction of several garden-city-theory-associated projects in Poland, near Warsaw in particular, as this approach gained worldwide popularity. Some examination of the impact of Howard’s views upon urban development in Krakow thus seems to be justified.



## THE EARLY RECEPTION OF HOWARD'S IDEA IN KRAKOW (1898-1918): SALWATOR NEIGHBOURHOOD; GREAT KRAKOW PLAN; KOBIERZYN HOSPITAL

Howard's 1898 publication became known to Polish readers as early as 1899/1900 through early mentions of it, even before he published the final revised version in 1902, which was soon noted in Poland, and further extended summaries in 1903. However, in contrast to early Czech, German and Russian full translations, it was only partial Polish translations that were available. In fact, the first full Polish translation was only published in 2009<sup>7</sup>, attracting attention partly through its historic importance since the main wave of interest in the garden city had come to an end in Poland by the late 1920s. This means that at both its highest and lowest points, Howard's theory was perceived in Poland both partially and selectively, and the notion itself was often used for different reasons. On the other hand, shifting the focus from the garden city to the garden suburb owing to the greater practicability of the latter took place in Poland just as it did in other countries.

After Krakow was made Austria's borderline fortress, three rings of fortifications were built around the city between 1850 and 1914. The first, an inner ring, consisted of ten bastions linked continuously by earthworks. A large, mainly western portion of the inner ring earthwork, upon which a circumferential railway was built in 1888, was also sharply defined by the boundary of the city. Two outer rings consisted of dozens of separate forts and other military works were meticulously scattered around the city. The forts of the outer rings were masked with specially planted greenery and linked one to another by lateral and axial routes. They were accompanied by an infrastructure of army barracks, hospitals, storage facilities, and, from 1912, a military airport, located 3 km east of the city. The construction of buildings on most of the areas surrounding the inner ring was highly restricted as owners applying for a permit first had to sign a declaration that they would demolish their buildings at their own cost upon the request of the military authorities. This was the main reason for Krakow's immediate surroundings being almost free of buildings and looking like a large green belt. Coupled with certain monastery and burgher gardens within the inner ring city, this did indeed provide solid arguments in 1912 for calling Krakow a naturally developed garden city.

The first built project in Krakow linked to Howard's concept was that on the Salwator Hill. This "colony" of 26 detached houses along two curved streets was built according to the competition-winning entry submitted by Roman Bandurski and Szymon Weinberg (1908) on a hill slightly west of Krakow. It was the first area to be exempt from military limitations. These restrictions were later withdrawn across the entire surroundings of central Krakow, thus enabling the planning of Greater Krakow to go ahead in 1909. The Salwator houses, designed individually, were considered to be modest, elegant examples of Historicising and Art Nouveau architecture. Numerous attempts made to link this project with the garden city concept have resulted in the long-term view that this concept idea was at least partly responsible for the project<sup>8</sup>. Despite these assertions, it has never been proved that such a link existed<sup>9</sup>. However, even these unsuccessful and misattributed efforts to establish a link between a successful Krakow project and Howard's theory are indirect proof of the respect paid to garden city theory per se by generations of architects and researchers<sup>10</sup>.



FIGURE 1 Great Krakow Regulation Plan, the winning entry of the architectural competition (1909). Competitors were expected to determine the spatial development of the west area of Krakow, although it was soon to be extended almost evenly in all directions.

In 1909-1915, after most of the military restrictions had been shifted from the immediate surroundings of Krakow, the city's area was substantially enlarged from 5.8 km<sup>2</sup> to 47.4 km<sup>2</sup>. In November 1909, when the suburbs were becoming part of Krakow, an architectural competition for the regulation plan of Greater Krakow was announced. The winning entry (Figure 1) by a team of local architects – Jozef Czajkowski, Wladyslaw Ekielski, Tadeusz Stryjenski, Kazimierz Wyczynski, Ludwik Wojtyczko – became the basis for further development, although more ideologically than legally. Although neither the conditions of the competition nor the principles of the winning entry referred directly to garden city theory, its general indirect impact on the competition entries can safely be assumed. The plan was also shown to Howard during his visit. Three years later, in 1915, the Podgorze city on the southern bank of the River Vistula was also incorporated, which completed the ring of new districts of Greater Krakow.

There is one more built project whose shape is related to the garden city: the carefully composed psychiatric hospital complex in Kobierzyn, located not far from the new southwest edge of Krakow, which later became its catchment area. Its connection with the garden city concept is emphasised by its semi-residential function (patients staying for longer periods) and the generally strong interest expressed at the time by urban planners towards medical and hygiene matters<sup>11</sup>. Designed by Wladyslaw Klimczak and built in 1909-1917, the Kobierzyn hospital complex consists of 15 pavilions, a theatre, chapel and bakery, together with many auxiliary buildings, all set within greenery (Figure 2).



FIGURE 2 Psychiatric Hospital in Kobierzyn, built in 1909-1917. The 1920s air view shows the careful composition of pavilions for the patients as well as public and auxiliary buildings.

## **KRAKOW IN THE SECOND REPUBLIC OF POLAND (1918-1939). THE GARDEN SUBURB OF OFFICER NEIGHBOURHOODS**

Poland regained its independence in November 1918, becoming the Second Republic of Poland. Its borders were finally established in 1922. During the Inter-war Period, Krakow was the fourth or fifth biggest Polish city (inter-changing with Poznan), but both cities way behind the capital, Warsaw, and Lodz, the industrial giant, and Lwow (now Lviv in Ukraine). The number of Krakow residents increased from ca. 180,000 in 1918 to nearly 260,000 in 1939. The area of the city, recently enlarged eight-fold, was only extended slightly. Krakow was the local administration and economic centre, and also an important cultural and academic centre. In 1918, the city ceased to be the powerful fortress it had been since 1850. The creation of “Greater Krakow” provided the city with substantial opportunities for development.

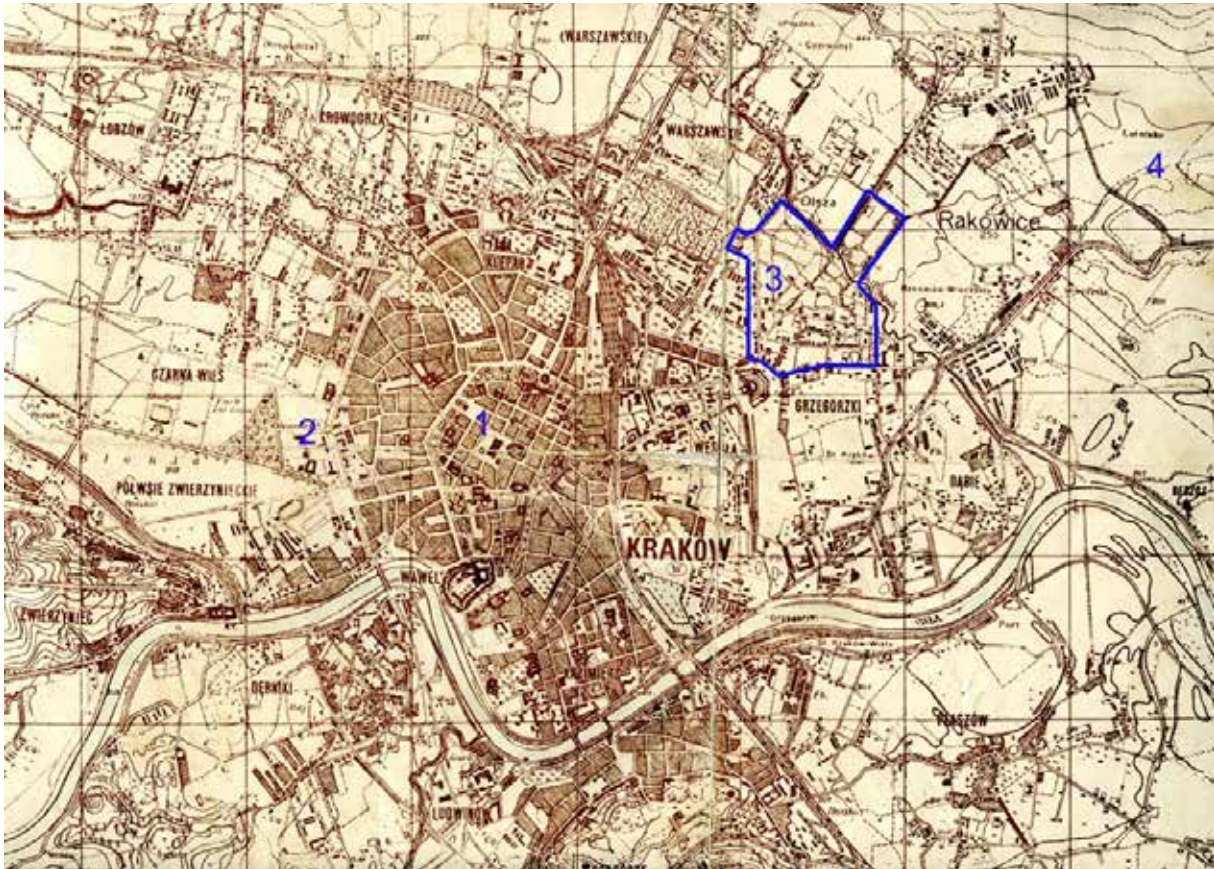


FIGURE 3 Plan of Krakow in the Interwar Period, 1934. 1 - historic centre with the Market Square. 2 - site of the former Exhibition of Architecture and Interiors within Garden Surroundings, which Howard had also visited in 1912. 3 - range of Officer Neighbourhoods complex. 4 - Rakowice airport area (not marked precisely as it was both civilian and military building at the time).

The urban development of Krakow in the Interwar period was relatively slow and harmonious. Regulation plans and subdivision plans were the standard tools of planning. Although, the first master plan of the city had been fully drawn up, its full implementation was soon to be curtailed by the outbreak of World War II in 1939. However, a significant number of new structures had been built by that time. Apart from many public edifices, most of these were residential multi-family buildings which lined both existing and newly laid-out streets with continuous frontage lines. Residential complexes consisting of a number of separate buildings were less common. For our purposes, the biggest and the most interesting project is the case of the Officer Neighbourhoods (Figure 3), this name derived from the fact that majority of its owners and residents were military and veteran families.

The complex of Officer Neighbourhoods was located on post-military use grounds in the northeast part of Krakow, halfway between the city centre and Rakowice airport<sup>12</sup>. It was planned by the Municipality of Krakow through a number of regulation and subdivision plans, most of them drawn up by engineer Marian Lenk in 1924-1926. The area was framed by three existing boundaries: the former fortification line in the west, the east-west former military road in the south and the River Bialucha flowing southeastwards. It consisted of several parts (Figure 4): two Officer Neighbourhoods, the Official Neighbourhood, with the triangle-shaped “New Territories” in between, and some smaller adjacent areas. Altogether ca. 600 lots were laid out for 160 detached houses, 170 semi-detached houses (on 340 lots), 60 three-storey row houses along the western edge and six four-storey blocks of flats in the southeast corner. The detached houses were destined for one, two or several families.

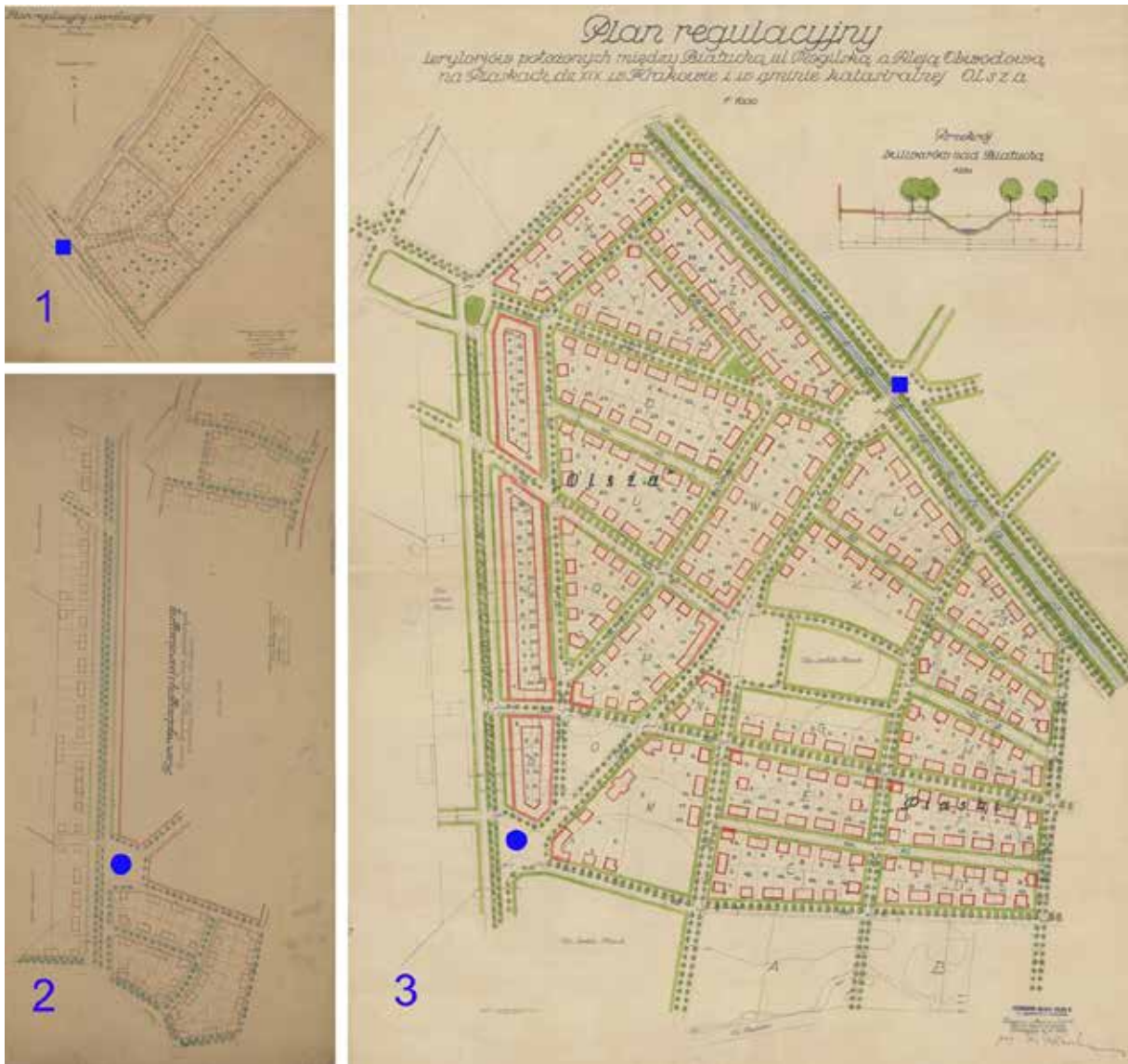


FIGURE 4 Regulation plans of the Officer Neighbourhoods. 1 - Official Neighbourhood (1924). 2 - Officer Neighbourhoods I and II (1925). 3 - “New territories” (1926). The blue, same-shape circles and squares mark the same sites in different projects.

Approximately half of the lots were built-up by 1939, which made the Officer Neighbourhoods the largest Krakow garden suburb of the Inter-war Period. The first houses, dating back to the 1920s, were of modernised classical forms, influenced by the idea of national architecture, referring to traditional old-Polish manor houses with their porches, columns and pitched roofs. The more Modernist 1930s houses featured flatter roofs and reduced decoration.

The neighbourhoods were equipped with seven small squares of various designs. All streets were to be lined with trees, most of them on both sides. Greenery/foilage, technical infrastructure, and roads followed soon after, including the construction of a bridge across the River Bialucha in 1934, which helped access the Officials’ Neighbourhood to the north.

Part of the Officer Neighbourhoods complex was localised outside the city limits of the time – on the grounds of the adjacent Olsza village. However, it made almost no difference to the way both sub-areas were laid out and built up.

The plans for Officer Neighbourhoods were clear but neither simplified nor random. They were part of a carefully planned project to develop the newly acquired district and to provide residential space and housing of a decent standard. The project was preceded by the establishment of an Association for the Officials' Neighbourhood in 1921, and the Officer Housing Cooperative in 1922, which bought or rented land, respectively. Those cooperative initiatives also bore some resemblance to the basis of Howard's views on the organisation of the garden city, or garden suburb in this case<sup>13</sup>. Remarkably, these neighbourhoods were planned and built in an area which had been found suitable for that purpose by Howard himself in his Krakow presentation in 1912<sup>14</sup>.

## **KRAKOW DURING THE SECOND WORLD WAR AND THE NAZI OCCUPATION (1939-1945)**

The harmonious urban development of Krakow during the Second Republic of Poland was brutally brought to a halt by the outbreak of World War II. From September 1939 to January 1945 the city was occupied by the German Nazi army and civil authorities. Since the headquarters for a quarter of occupied Poland were located there, a large number of German officials and soldiers arrived. Many of them were stationed in flats and houses from which their Polish and Jewish owners were expelled. Apart from this, in 1940-1944 an entire German neighbourhood was built along the major tract in the west of Krakow, and its form bore some resemblance to the garden suburb, which seems to have resulted from a combination of factors. The neighbourhood's southern part was designed by local Krakow architects while the northern side buildings were probably<sup>15</sup> typical projects of multi-family houses common in late-1930s German architecture, which in turn had been indirectly influenced by both German early 20<sup>th</sup>-century picturesqueness and the Howard concept itself. It might also have been a coincidence<sup>16</sup>.

## **KRAKOW IN THE COMMUNIST POLAND (1945-1989). NEW CITY OF NOWA HUTA**

World War II brought about the death of nearly 6 million people in Poland and migrations of many more. The country suffered disastrous material losses, including the destruction of most of its industry and cities. Krakow lost over a quarter of its population, although its building stock was left almost intact.

The Communist political system took over in Poland in 1945 as a result of Soviet Union domination. In 1949, architecture and town-planning were subdued to the doctrine of Socialist Realism, which favoured symmetry and Classical forms and sought national elements in certain Renaissance and vernacular forms. The city's rapid growth began in 1949 after the central state authorities decided to locate a vast industrial complex 10-15 kilometres east of the centre of Krakow (Figure 5). Nowa Huta was established both as a metallurgical plant and an adjacent city. It was a planned "Socialist" city, originally intended for 100,000 residents (the factory for 10,000 workers) and despite its incorporation into Krakow in 1951, it remained for a long time a separate urban unit.

The city of Nowa Huta was placed between three villages and bordered by two local roads (one of them along a steep escarpment over the Vistula Valley) and the River Dlubnia. The land was fertile, harvested, and free of buildings. The owners were expropriated and received little or no compensation. The city and steelworks were built simultaneously. The construction of the steelworks started in April 1950, and the production of steel in July 1954. The steelworks, named after Lenin (until 1990), became the biggest industrial unit in Poland. The construction of the city started in June 1949, even before the master plan was completed in 1951 by a team of architects led by Tadeusz Ptaszycski. One of them, Stanislaw Juchnowicz, explained the city's shape: "five traffic and compositional arteries radiating out from the Central Square, located next to the edge of the escarpment, connect the most important local centres with the very centre of the town".<sup>17</sup> Three compositional axes, which determined the city space, intersected at one point – in Central Square.

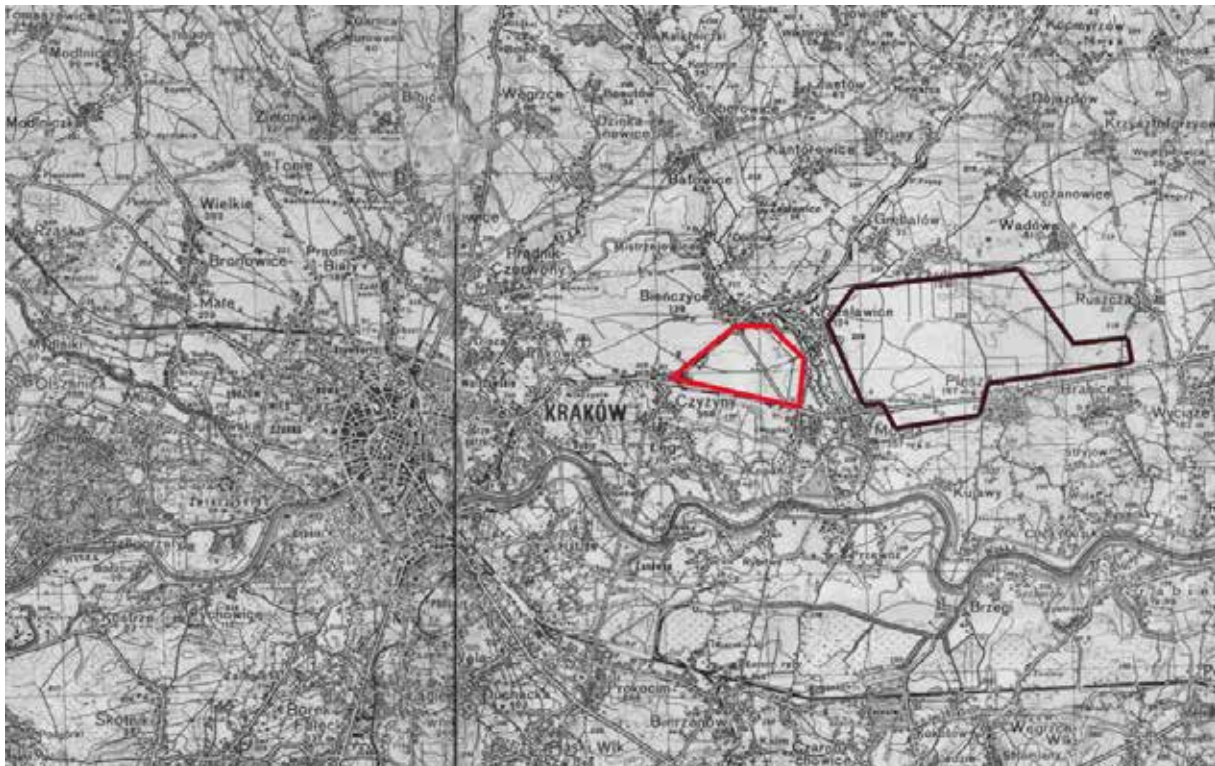


FIGURE 5 Nowa Huta, the scheme of 1949 locations of the city (within the red frame) and the steelworks (within the brown frame) in relation to the centre of Krakow, as shown on the 1934 map.

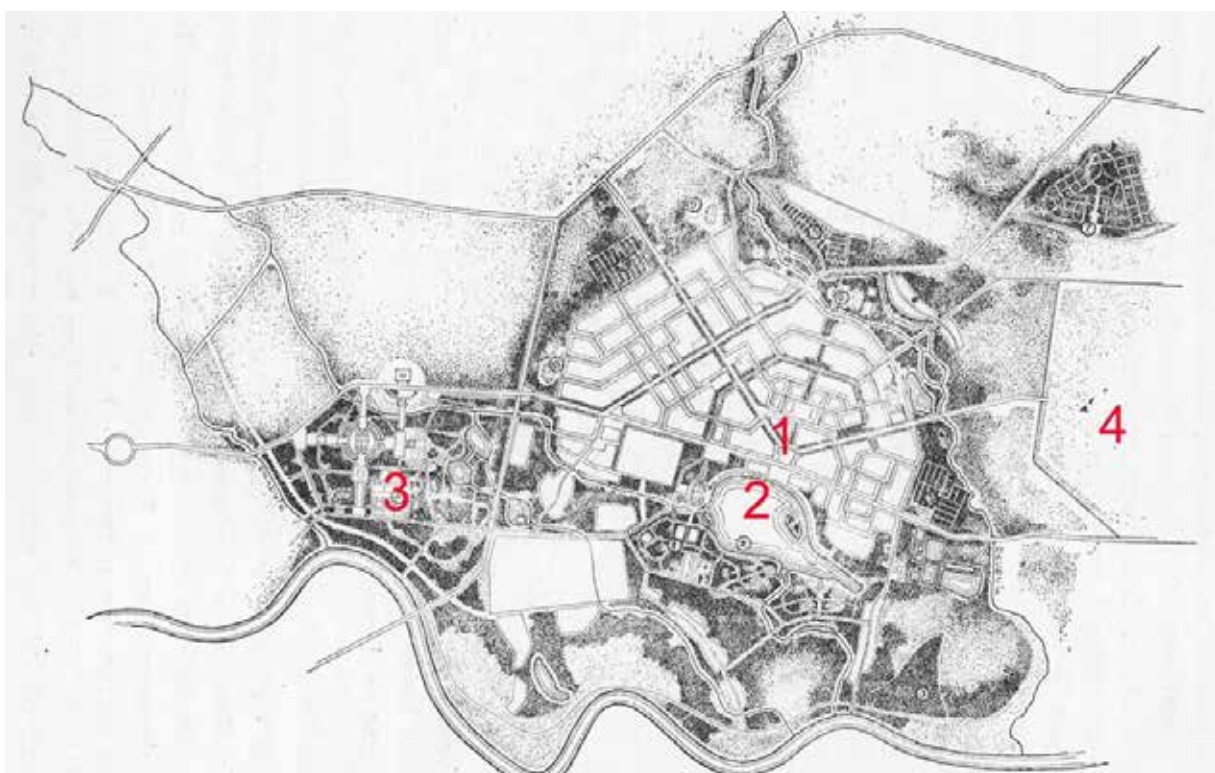


FIGURE 6 Nowa Huta, the plan of the town with surrounding greenery. 1 - Central Square. 2 - artificial lake (never built). 3 - Park of Culture and Leisure. 4 - steelworks. Project by Stanislaw Juchnowicz and Mieczyslaw Barbacki, 1954

Like most Socialist Realism urban design, the idea of the Nowa Huta centre was influenced by Lothar Bolz's urban views of 1951. "The measure of the centre's grandeur is not the passenger rushing through the city in a modern car but rather the pedestrian, the political demonstrator and his marching pace"<sup>18</sup>. The historicising neo-Baroque plan of Nowa Huta was combined with neighbourhood units. The neighbourhood unit idea, presented by Clarence Perry and applied by Henry Wright and Clarence Stein in their Radburn project in 1928, had its origins in the garden city idea (which Bolz criticised) and was amended mostly to include car transportation. In Nowa Huta the system of 24 neighbourhood units was designed for approximately 5,000 residents a piece. They were equipped with all the basic amenities: nurseries, kindergartens, playgrounds, schools, shops, services, garages, parking lots. The separation of vehicles and pedestrian routes allowed the residents to walk from any building entry e.g. to a nursery or to a shop without crossing a road.

Except for the first neighbourhoods, in which standard small housing units were built, most of the Nowa Huta neighbourhood units consisted of both free-standing buildings (especially inside their spacious courtyards) and of buildings which continuously lined most of the streets and boulevards. The arched passages across the external buildings ground-floor plans made pedestrian traffic possible between courtyards and avenues. The height of the residential architecture ranged from two to eight floors, depending on the location of buildings within the city. The buildings next to the Central Square were the tallest and most decorative in order to mark the exact centre; the more peripheral the location, the shorter and less decorative the buildings. This deliberate distinction was possibly due to the complex way in which the city was designed and built in the 1950s. By 1960 the original plan of Nowa Huta had already been completed and a target of 100,000 residents attained<sup>19</sup>. A number of public buildings were constructed: the theatre and three cinemas in the centre; a large sports stadium and a regional hospital – on the edges. The town-hall and the house of culture were planned but not built.

The amount of greenery in Nowa Huta was significant, both between blocks and along the boulevards. In addition, a large Park of Culture and Leisure was laid out between "Old" Krakow and Nowa Huta, south of the airport before it moved out in 1963. In contrast, the large artificial lake project at the foot of the escarpment was never built (Figure 6). Nowa Huta is one of only four entirely new towns built in Poland during the 20<sup>th</sup> century, and is the one most related to the garden city idea<sup>20</sup>. Its response to the post-war housing shortages also reveals some similarity to the New Towns that were planned in the United Kingdom<sup>21</sup>. The foundation of Nowa Huta in 1949 resulted in a spatially well-balanced district but also the beginning of the industrialisation-based process of the rapid development of the entire city of Krakow. The master plans – drawn up for Krakow in 1949, 1953, 1956, 1958, 1966, 1977 – quickly became outdated: either not enforced or soon replaced with newer plans. After 1956, with Socialist Realism no longer obligatory, new numerous housing projects consisted of large, free-standing, typical buildings of most simplified Modernist forms. Despite the fact that these vast neighbourhoods were built by so-called cooperatives, they had little to do with the communities Howard had thought about in relation to the garden city. Due to the growth of Nowa Huta, maintaining a constant population limit, which was one of the key features of Howard's theory, was not possible and the population finally more than doubled.

## THE REFLECTION OF HOWARD'S IDEA IN KRAKOW SINCE 1989

In June 1990 local elections in Krakow, as well as over the whole of Poland, were held for the first time since 1938. The last 1988 Krakow master plan, amended in 1994, ceased to be valid in 2003. This means that the Study of Conditions and Directions of Development, passed in 2003 and 2010, remains the city's basic planning document. In accordance with this study, precise Local Development Plans are carried out in Krakow. By 2016 these plans now cover nearly 50% of the city area.

The contemporary Krakow area (327 km<sup>2</sup>), which was enlarged six-fold in the 1940s and 1950s, and its population (ca. 760,000) have remained unaltered since 1989. Krakow has been modernised with the intention to transform



the city into a metropolitan centre through functional changes and technical improvements. The functional variety and intensification of built-up areas was promoted as opposed to any type of urban sprawl. Large numbers of new residential, public and commercial buildings as well as modernised infrastructure have increased the general standard of living.

Howard's idea has been favourably mentioned in certain books and publications regarding Krakow's urban development, but attempts to put it into practice are no longer being made. In the most recent period, phrases containing "garden" (or "green") words have been most valued by developers, potential clients, patrons and authorities and have been used in information leaflets and advertisements on new projects, which can hardly refer to what Howard actually meant. Very few of the many housing projects built since 1989 in Krakow, regardless of their quality, feature any relation to the garden suburb, let alone the garden city. The biggest residential complex, Ruczaj in southwest Krakow, which consists of many individual housing projects, has become a synonym for uncoordinated development, excessive density and highly limited public space.

One notes that the "garden city" notion has evolved with time. Apart from its traditional Howardian meaning, which to an extent is still maintained within professional circles, it has taken on other popular meanings. There are firms named "garden city" and promotional slogans referring to this type of development. An interesting case is the "City – Garden" annual competition in Krakow<sup>22</sup>, which was started in 1995 in order to reward the creators of the nicest gardens, flower-laden balconies, and other forms of "small greenery", such as vines planted to cover the walls. Each year a number of prizes are given to those Krakow residents from whose activities the whole society may benefit visually.

## CONCLUSIONS

In early 1900s one might have expected that Howard's ideas, like most theories, would soon sink into oblivion, but they didn't and have never entirely been forgotten. The influence of garden city theory was and still is perceptible in Krakow, although unequally, both from a timeline and typological perspective.

The different manifestations of this approach, and the incidence of its exemplifications has been limited. Moreover, references to Howard's concept does not necessarily mean that his original views were shared. The extent of garden city influence weakened over time. However, some of the urban challenges Krakow was faced with were responded to with solutions that had at least some features of the garden city concept.

The ideological disquisition of the three magnets put forward thoroughly by Howard in both editions of his books were found interesting, especially in the first quarter of the 20<sup>th</sup> century, but later disregarded. There was only limited connection with the economic aspects which Howard was so precise about, such as economic and land-owning systems in Great Britain and Poland differed significantly, especially in the period between 1945 and 1989. There was more influence with regards to spatial matters, although they were partial and the links were not referred to openly as was the case of Nowa Huta. The historic importance of Howard's theory turned out to be the most enduring in textbooks on architecture, planning and related arts since most of them include it. Therefore, one may find a parallel between Garden City theory and Renaissance "Ideal City" theory, which was also hardly put fully into practice<sup>23</sup> but nevertheless helped improve the standard of planning and the quality of urban life over the next centuries.

By the end of the 20<sup>th</sup> century, certain Polish authors had already noted and considered the relation between Howard's theory and the case of Krakow<sup>24</sup>. In the 21<sup>st</sup> century, certain more complex publications on this subject have been released, including two thorough research-based books. The book by Edyta Barucka (2013) provided an overview of the reception of the Howard's theory in European countries (including Poland) in the chronological

and geographical orders till 1930<sup>25</sup>. An earlier book by Adam Czyzewski (2009) considered Howard's theory in relation to a number of numerous juxtaposed approaches and problems, ranging from planning and utopia to hygiene and eugenics<sup>26</sup>. Both these authors discussed Polish garden cities, though neither of them paid much attention to Krakow as a part or as a whole. However, they both noticed the rapid reception of the garden city idea by Krakow professional circles. The book by Czyzewski actually contained the first full edition of the original Howard text in Polish, with all the illustrations from both the 1898 and 1902 editions. In 2015, another Polish edition of Howard's book, based on another translation, was published<sup>27</sup>.

Each of the discussed Krakow projects bears different marks of the impact of Howard's theory. Pioneers like the creators of the Plan of Greater Krakow (1910) enjoyed the chance of connecting the densely built-up city with newly acquired rural and open areas. They also adhered to certain direct remarks made by Howard himself. The 1924-1939 Officer Neighbourhoods were initiated by authentic cooperatives whose careful efforts were intended to create a balanced garden suburb at the edge of the city. The 1940-1944 Nazi district, which was set up by an alien power in Krakow, had a certain limited visual resemblance to proposals for early garden cities. The 1949-1960 Nowa Huta development was located a few kilometres from Krakow as an entirely new town consisting of neighbourhood units of a precisely assumed population (though on the whole bigger than the original number put forward by Howard). However, right from the beginning, it was intentionally created in opposition to any village look and soon became a large district of the city to be further developed by quasi-cooperatives. And none of the post-1960 attempts to apply Howard's theory in Krakow can be taken seriously.

One single 1912 sentence uttered by Howard about Krakow has thus enjoyed an outstanding career! The verbal importance of the term "garden city" has also survived. It no longer means the same as it did a century ago, although it sounds equally or even more attractive, which is not now the case in Krakow and Poland<sup>28</sup>. Unfortunately, there would be much less justification now for calling Krakow "the garden city from natural growth" than there was in 1912.

## Disclosure Statement

No potential conflict of interest was reported by the author.

## Notes on contributor

Maciej Motak does research in history of architecture and urban forms, heritage protection, contemporary architecture. He is the author of 3 books including "Architecture of Krakow 1989-2004" and "History of Krakow Urban Design, an Outline", and over 80 research papers. He also edits scientifically and translates books on architecture. He is the author or co-author of over 30 built projects of residential and public buildings, and of 11 competition projects in the fields of architecture and planning (including the awarded project for Principles of Krakow Local Revitalisation Programme in 2006, with the team led by Anna Kantarek).

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## Image Sources

- Figure 1: The Historical Museum of the City of Krakow [after:] Wielki Krakow, ed. Marek Maszczak, Magdalena Skrejko. Krakow: Muzeum Historii Fotografii, 2007.
- Figure 2: 10-lecie Polski Odrodzonej, Krakow-Warszawa: Wydawnictwo Ilustrowanego Kurjera Codziennego, 1928.
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- Figure 4: The National Archives in Krakow [ABM Regulacje III 326-328].
- Figure 5: Author's archive and evaluation.
- Figure 6: Stanislaw Juchnowicz, *Tereny zielone w projekcie miasta Nowa Huta [in:] Zielen Krakowa*, ed. Jerzy Dobrzycki. Krakow: Wydawnictwo Literackie, 1954.

## Endnotes

- 1 Czas 367, Krakow, 1912.
- 2 For instance, in June 1912, two months before the Howard's visit, the local daily announced, among other guests of a Krakow hotel, the stay of "Włodzimierz Ulianoff from Paris" i.e. Vladimir I. Lenin (not much known then), the future Bolshevik Revolution Leader, who lived in Krakow till May 1913. Czas 281, Krakow, 1912.
- 3 Wacław Ostrowski, *Sir Ebenezer Howard in Poland*, *Town & Country Planning*, vol. 34, no. 11, 1966. 511.
- 4 The exhibition was frequented from June to October 1912. The exhibited buildings were lost in fire in 1915. In 2012 the In-Habitation exhibition, which referred to the 1912 one, was held in the nearby National Museum's main edifice. The 1912 exhibition was the biggest event of that type ever in Krakow.
- 5 Adam Czyzewski, *Trzewia Lewiatana. Miasta ogrody i narodziny przedmiścia kulturalnego* (Warszawa: Państwowe Muzeum Etnograficzne, 2009). 38. It provides the thorough analysis of Howard's theory.

- 6 E.g.: Janusz Bogdanowski, *Warownie i zielen Twierdzy Krakow* (Krakow: Wydawnictwo Literackie, 1979). 226. E.g. Maciej Motak, *Historia rozwoju urbanistycznego Krakowa w zarysie* (Krakow: Wydawnictwo Politechniki Krakowskiej, 2012). 32.
- 7 Translation by Piotr Borman, Published in a single volume with: Adam Czyzewski, op. cit. (see Endnote 5).
- 8 Katarzyna Brückman De Renstrom, *Salwator*, Krakow, *Europa* (Krakow: Politechnika Krakowska, 2003). 14, 32, 36.
- 9 Katarzyna Brückman de Renstrom, *Salwator a sprawa Howarda, czyli o wątpliwościach co do howardowskiego rodowodu pierwszego willowego osiedla Krakowa* (Krakow: Czasopismo Techniczne vol. 1-A, 1997). 295-318.
- 10 Some recent planning documents still maintain the view of Salwator neighbourhood being established as a garden city, e.g. *Studium uwarunkowan i kierunkow zagospodarowania przestrzennego Miasta Krakowa* [Study of Conditions and Directions of Spatial Development of the City of Krakow], 2010-2014, p. 31.
- 11 For instance, one of the most engaged advocates of Howard's concept was medical doctor Wladyslaw Dobrzynski. See: Wladyslaw Dobrzynski, *Istota i rozwoj idei Howarda. Miasto - ogrod* (Warszawa: Przegląd Techniczny, 1917).
- 12 Originally the military airport, in 1923 it became the Krakow civil airport as well. It was closed in 1963 and the airport moved to Balice beyond the west edge of the city.
- 13 The Officer Housing Cooperative was finally dissolved in 1954, which merely confirmed its forced inactivity. Malgorzata Baczynska, *Osiedle Oficerskie w Krakowie* (Krakow: Rocznik Krakowski, vol. LXXX, 2015). 173.
- 14 Czyzewski, op. cit. 37.
- 15 The authorship of the projects is still discussed. See Kazimierz Butelski, *Architekt Zbigniew Kupiec 1905-1990. Ewolucja tworczości od modernizmu do regionalizmu* (Krakow: Fundacja Pro Architectura, 2012). 154.
- 16 One of the three Polish architects, Tadeusz Futasewicz, was probably a relative of architect Stanislaw Futasewicz who had been strongly involved in the designing of garden suburbs of Warszawa in 1910s.
- 17 Stanislaw Juchnowicz, *Nowa Huta* (Architektura, vol. 1., 1986).
- 18 Andrzej Lorek, *Kompozycja przestrzenna Nowej Huty w kontekście teorii i praktyki urbanistycznej socrealizmu* [in:] *Narodziny Nowej Huty*, ed. Jan Malecki (Krakow, Towarzystwo Miłośników Historii i Zabytków Krakowa, 1999). 127.
- 19 Both the residential part of Nowa Huta and the steelworks continued to grow beyond the size initially planned and in 1978 they reached 220,000 residents and 38,000 workers, respectively.
- 20 The other three ones are: the port city of Gdynia (1920s), and the worker towns of Stalowa Wola (1930s) and Nowe Tychy (1950s).
- 21 The evolution of garden city in this aspect is discussed by Dennis Hardy: *From Garden Cities to New Towns: Campaigning for Town and Country Planning, 1899-1946*. Idem, *From New Towns to Green Politics: Campaigning for Town and Country Planning, 1899-1946, Studies in History, Planning and the Environment* (New York: Routledge, Chapman & Hall, 1991).
- 22 It is organised by the Cyprian Kamil Norwid Cultural Centre in the Nowa Huta district of Krakow.
- 23 One of the few and best built projects of an Ideal City is Zamosc in eastern Poland, built in 1580-1605. The town-hall of Nowa Huta, which was never built, was designed as a Socialist-Realism variation on the late-Renaissance town-hall in Zamosc.
- 24 Bogdanowski, op. cit.; Brückman De Renstrom, *Salwator a sprawa...*, op. cit.; Ostrowski, *Sir Ebenezer Howard...*, op. cit.; Wacław Ostrowski, *Ebenezer Howard – pionier współczesnej urbanistyki*, (Warszawa: Studia i Materiały do Teorii Architektury, vol. 9, 1971).
- 25 Edyta Barucka, *W szkatułach zieleni. Europejski ruch miast ogrodów 1903-1930* (Warszawa: Wydawnictwo Uniwersytetu Warszawskiego, 2014).
- 26 Adam Czyzewski, *Trzewia Lewiatana...*, op. cit.
- 27 Howard, Ebenezer, *Miasta-ogrody jutra*, translation by Martyna Trykozko, preface by Dorota Lesniak (Warszawa: Centrum Architektury, 2015).
- 28 In the second edition of the book by Peter Hall and late Colin Ward, the former quoted a recent positive reference made by British Prime Minister David Cameron to the "Garden City solution". Peter Hall and Colin Ward, *Sociable Cities. The 21st-Century Reinvention of the Garden City*, Abingdon and New York: Routledge, 2014. Preface 9.

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# COLLECTIVE URBAN ADVERSE POSSESSION IN REGULATING IRREGULAR OCCUPATIONS AND PROMOTING THE SOCIAL FUNCTION OF URBAN PROPERTY

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In this paper, we will deal with collective adverse possession and focus on analyzing this urban instrument within a more humanitarian view. This is due to the fact that the difficult access of the low-income population to the real estate market has made it settle in the outskirts of the great centers, in faraway territories, frequently without public service, causing urban disorganization and concentration of slums. This setting affects not only people's life but also the whole structure of the city. This study aims to show the evolution of the right to property, abandoning its absolute notion, focusing on the use of the property in line with the social function of the city, thus allowing for this right to be exercised in a more humanitarian and fair way. It points out the importance of the right to housing as a fundamental right and as a way of assuring dignity and healthy development of the city and its inhabitants.

## Keywords

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## How to Cite

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## INTRODUCTION

In some urban centers, the Brazilian urban development scenario has created a housing shortage and consequent irregular settlements, problems stemming from the combination of the inefficacy of the land reform, industrialization process, rural exodus and a lack of urban planning.

With the 1988 Federal Constitution, the city, with its two realities - the regular settlements and irregular settlements - takes on the legal nature of an environmental good, having as vector principles the social function of the property (article 5, item XXIII, of the Federal Constitution), the capitalist economic system and the respect to the dignity of the human being (article 1, item III and IV, of the Federal Constitution).

So, in item 1 we will show the evolution of the right to property, with emphasis on the social function. In item 2, we will deal with the right to housing, contextualized in the City Statute, aiming at showing the importance of the collective urban adverse possession as an instrument which provides the right to housing and the social function of property with effectiveness.

In item 3, we will touch on the social function of property in the City Statute, where the social function of urban property occurs when it meets the requirements of the master plan designed by the Cities. Thus, the sole paragraph of article 1, of the City Statute, lays down the use of urban property for the collective good, safety, well-being of the citizens as well as environmental balance.

Indeed, urban collective adverse possession allows for the organization of the space to reach life quality of people in the city. This will be the focus of item 4, when it points out the importance of the collective urban adverse possession instrument, because in order for the respect to social function to exist and the exercise of the right to property to reach the urban functions, a study on the Statute, intertwined with the constitutional principles, is necessary. Such study allows for the recognition of the founding principles of the Constitution, in articles 1 to 4, mainly exerting citizenship as well as the dignity of the human being, the democratic management of the city, with social justice, so that a fair and caring society can be built.

## URBAN PROPERTY IN BRAZILIAN LAW

Today's legal science studies the legal institutes from the finalistic perspective in search of solidarity and common good. Property is institutionally guaranteed by the Brazilian Constitution and its context established by Law, which ensures the owner the right to use, enjoy and dispose of his properties<sup>1</sup>.

More specifically, the Federal Constitution guarantees the existence of the right to property as a fundamental law, while the ordinary law must define and regulate such right<sup>2</sup> as well as limit it

Property is only guaranteed if its exercise meets both its content defined by ordinary law and the social functions. Social function is seen as a functional element which "takes on a decisive controlling role over the other static elements (use, enjoy, dispose of and retrieve)"<sup>3</sup>.

The exclusivity character permeates the right to property. However, this doesn't mean using or enjoying a certain property disproportionately.

Once the content of the right to property is defined by ordinary law and there is a considerable variety of it, it is said that there isn't just one property. The Constitution itself differentiates urban property (article 182, § 2) from rural property (articles 184, 185 and 186), resulting in two kinds of property, already in the constitutional text<sup>4</sup>.

The Federal Constitution, article 5, guarantees generic property, which will have structures, contents and social functions different from one another, according to their use.

## **SOCIAL FUNCTION OF PROPERTY**

After a long process of individualization of the human being and removal of the interference of the State in order to define the legal spheres of individual freedom (first generation of fundamental rights) and the subsequent search of intervention of this State to assure equality among people (second generation of fundamental rights), society is ready for solidarity.

In the 1988 Federal Constitution, primacy is attributable to life or extra-patrimonial situations, translated into a long list of fundamental rights. In this system, the lonely individual, isolated in his economic activity, is turned into a caring person who lives in society and finds in the needs of others a clear limit to his acting freedom.

The democratization of the Brazilian State, from 1988 on, has aimed for this solidarity among its members and the restructuring of the social relations, that is, a fair social order, which means putting a social content together with the concept of public and private property <sup>5</sup>.

Because of the third generation of fundamental rights, we now live the time fraternity, solidarity and collectivization and trans-individualization of the legal institutes. The notion of individuality has been reviewed under the perspective related to the fellow man, to the community, to the common good.

In other words, the social function has imposed duties (positive obligations) on the owners before the community. This idea arose from the Constitution of Weimar which, in its article 153, wrote, “Property entails obligations and its use and exercise must, at the same time, represent a social function” <sup>6</sup>.

To José Afonso da Silva, private property can no longer be seen as a pure individual right, since it is also included as a principle of the economic order. Therefore, it is linked to the principle which assures everybody a dignified life, according to the dictates of social justice<sup>7</sup>

In this context, “social function is expressed in the structural configuration of the right to property, definitely placing itself in the predetermination of ways to acquire, enjoy and use goods as a qualifying element” <sup>8</sup>.

Social function qualifies property and imposes a two-way condition (power-duty), that is, the right to use, enjoy, dispose of and claim something, and also a duty before the other members of the society. Indeed, property is only guaranteed as a right if it fulfills the social function.

Because of the evolution of the concept, the social function of property has been given, as far as the Civil Code goes, a socio-environmental feature which prevents damage to the natural, cultural or artistic environment in the exercise of property, in line with the rights of the third generation. Such structure is aligned with article 225 of the Federal Constitution, which deals with a balanced and essential environment for a healthy quality of life.

Social function is a dynamic element which changes the structure of property according to its exteriorization from use, legitimizing it.

## **RIGHT TO HOUSING**

The right to housing is a fundamental right which is in the category of social rights, and, together with economic and cultural rights, represents the second generation of the fundamental rights. They aim to provide the individual with basic conditions so he can live with dignity and actually exercise the right to life, freedom, equality, safety and property.

The right to housing as a right to an adequate standard of living is recognized in article 25 of the Declaration of the Human Rights and article 11 of the International Treaty of Economic and Cultural Rights, which grant every person the right to adequate housing.

It was by means of Amendment 26, of February 14, 2000, that the right to housing was explicitly included in the Constitution, chapter II, article 6, as a social right.

It is about express inclusion of the right to housing in the Constitution, but, as a fundamental right, it had already been accepted by the Federal Constitution through the recognition of international treaties, and, indirectly, through other constitutional articles.

Article 183 of the Federal Constitution also refers to the right to housing.

One can see that the goal of urban adverse possession is for urban property to fulfill its social function and the social function of the city, being an instrument of land regularization and, at the same time, to promote access to housing.

## **SOCIAL FUNCTION OF URBAN PROPERTY IN THE CITY STATUTE**

The City Statute – Law nº 10257 of 2001- deals with the urban property and its social function. It is worth drawing attention to the fact that, although the social interest and common well-being had been provided since the 1934 Constitution, and reiterated in the 1988 Federal Constitution, only in 2001, with the City Statute, was the social function of urban property regulated<sup>9</sup>.

The City Statute provides that the social function of the urban property happens when it fulfills the demands of the master plan designed by the Cities. As for the social function of the urban property, sole paragraph of article 1 of the City Statute provides that its use will be in favor of the common good, safety and well-being of the citizens, as well as the environmental balance. Social function isn't just taken from the master plan, as the City Statute makes it seem. It is present in urban plans and also in building norms. It is also necessary to consider that the installation and development of cities represent huge environmental impacts. That's why it is natural that concepts of environment law permeate the social function of the urban property by direct incidence of article 225 of the Federal Constitution.

Urban law gets the concept of sustainable cities also from environment law<sup>10</sup>. According to Odete Medauar, sustainable development is “the fulfillment of the needs of the current generation without sacrificing future generations and, therefore, the meaning of solidarity”. And she adds that sustainable cities are “those where the urban development occurs in an orderly way, without chaos or destruction, without degradation, making urban life possible for everybody”. Housing, adequate conditions of work, recreation and circulation of people exemplify the urban functions which make up the social function of the city<sup>11</sup>.

The social function of the city, according to Saule Junior, consists of the right of everybody who lives in the city to housing, urban equipment and services, public transportation, basic sanitation, health, education, culture, sport, leisure; in short, inherent rights to life conditions in the city<sup>12</sup>.

Housing makes up the social function both of the urban property and of the city. This is reinforced by international treaties and also by the 1988 Constitution, which establishes institutes that value family work and housing, such as the special rural and urban constitutional adverse possession, in which time requirement has been pretty much reduced (to 5 years) if possession with *animus domini* is exercised for work or housing.

The social function of urban property and the social function of the city are intertwined. This is because the use and enjoyment of the property under the attention of the collective interest reflects on the social function of the city.



## **OWNERSHIP SAFETY AND THE RIGHT TO HOUSING**

When we speak of right to housing, ownership safety is essential to guarantee this right. These concepts are practically inseparable from each other “because it is about the central element of the human right to housing”, since housing without safety is subject to “permanent threat” and to “imminent evicting risk or forced displacement”<sup>13</sup>

Due to the emigration to cities, excluding and unplanned urbanization feeds into the insecurity of ownership, once it makes the newcomers, especially the poorer ones, settle in irregular housing and settlements.

In order to avoid that, the State must recognize the different forms of land use and occupation, be it rural or urban, and the laws must provide “legal and urban instruments which recognize people’s rights to stay where they live with safety and protection from evictions and natural disasters”<sup>14</sup>.

In this context, we will examine collective adverse possession as an instrument of effectiveness of the ownership safety and protection and, consequently, the right to property.

## **ADVERSE POSSESSION AND URBAN SOIL PLANNING IN AN ORGANIZED AND SUSTAINABLE MANNER**

In Brazilian law today, the fundamentals of the right to adverse possession show the need to pay more attention to the social functions of property so as to improve the collective well-being and decrease the uncertainties of the legitimacy of domain. Adverse possession allows for the consolidation of the property in favor of the owner who has worked and been restored to his socio-economic function.

In Brazilian legislation we have more than a form of adverse possession provided for by the Federal Constitution, Civil Code and City Statute. In this paper, we will talk about collective adverse possession only as a regulating instrument of the urban areas for a sustainable urban development

Brazilian reality shows the concern of big cities occurred disorderly and irregularly, with invasion of areas, clandestine settlements all because of a lack of urban infrastructure and of public and community equipment. This urbanization exposed the inhabitants of these regions to poor living conditions and to uncertainties about ownership legitimacy.

Thus, faced with the need to regulate the adverse possession situation of the low-income population, the constitutional legislator, based on valuing the dignity of the human being, assured the urban adverse possession. To assure the fulfillment of the objectives proposed by the City Statute, one of the instruments aimed for land regularization was the adverse possession. So, in its articles 9 to 14, the Statute has listed, among the instruments of urban policy, the special adverse possession of the urban real estate; in article 9, it includes the individual form and, in article 10, the collective form.

The passing of the City Statute expresses the result of long disputes over social exclusion, in search of the right to housing in a dignified manner.

The Statute has regulated articles 182 and 183 of the Federal Constitution, which aim at ordering the total development of the social functions of the city and assure the well-being of its inhabitants, and regulating the special urban adverse possession.

In order for the respect for the social function to be guaranteed and for the exercise of the right to property to reach urban functions, a study about the Statute, intertwined with the constitutional principles, recognizing the founding principles of the Constitution, provided in articles 1 through 4, is necessary. Among these principles, the ones related to the exercise of the citizenship, the dignity of the human being, the democratic management of the cities, with social justice, for the building of a fair and caring society, stand out.

The legislation meets the social claim for a more democratic management of the urban space, with important instruments to solve the problems stemming from the urban development, especially the right to living, provided for in article 6 of the Constitution.

The collective adverse possession assures the right to housing, promotes land regularization, guaranteeing the

urbanization of areas occupied by the low-income population.

According to the study by Ermínia Maricoto *the illegal settlement and the slum are the most common housing alternatives for the majority of the low-and-lower-middle income urban population*<sup>15</sup>. A slum is defined by the total illegality of the relationship between the dweller with the land: they are invaded areas.

For this reason, when setting urban norms that regulate the use and occupation of the urban land, it is necessary to face this reality, aiming for an active policy promoting the legal regularization of these houses, replacing this disorganization for urbanization and making it into an urban environment.

It is in this context that the instruments of land regularization proposed by the Statute, mainly the adverse possession, must be interpreted.

## COLLECTIVE ADVERSE POSSESSION IN THE CITY STATUTE

The so-called collective adverse possession is regulated by article 10 of the City Statute, which is about urban areas larger than two hundred and fifty square meters, as long as they are occupied by low-income population for housing, respecting the precept of article 183 of the Federal Constitution, concerning the length of possession, when it is not possible to identify the occupied lands by each holder. The active legitimacy is confined to the universe of the low-income population. The law doesn't make it clear what low-income population is, so, the judge shall observe the socio-economic situation of the holder and adapt it to this subjective requirement.

The occupation of the space shall last five years, and the possession shall qualify as uninterrupted and without opposition.

Urbanization is the most logical solution to solve the problem of the illegal city.

An example of effectiveness of collective urban adverse possession, for the promotion of dignity and ordering of the urban space in a sustainable manner, was Vila Eldorado, in the city of Curitiba, in the State of Paraná.

The occupation of this Vila in the western zone of Curitiba by hundreds of families coming from other areas of Curitiba and Paraná happened in 1989. The occupation started peacefully and without later opposition to the possession, and aiming only at setting up housing.

After the occupation, the Vila totally consolidated itself still in the 1990's. In 2007, when the adverse possession action was proposed, the Vila was made up of 323 (three hundred and twenty-three) families holding ad usucapionem ownership.

Vila Eldorado had a low-income population, since at least 33% of the population was below the poverty line (less than ½ of the minimum salary per capita).

To support the legal regularization of the lands and total urbanization of the Vila, a previous socio-economic survey was made, descriptive memos were produced and legal assistance was promoted for the proposition of the Adverse Possession Action. The action was necessary to implement the Project of Sustainable Land Regularization with financial and institutional support of the City Ministry, Caixa Economica Federal and Federal Government.

The Project aimed for the land regularization of the community in order to make later urbanization possible, with installation of sanitary sewage, approval of project of land subdivision, improvement of street lighting, public equipment, etc, which were put in by the City Hall and State and Federal Governments after the regularization of ownership of the occupied area by the 323 families.

## CONCLUSION

Urban property must be analyzed within the current scenario which involves Brazilian cities, mainly in the great centers, where a considerable part of the population live in slums, tenements and on the streets, increasing the number of homeless people, without any perspective and without dignity.

This population has the right to seeing their situation be treated in the light of the Federal Constitution, which assures the dignity of the human being.

So, when defining the social function of the urban property, parameters which enable the city to reach some vital social functions – work, housing, recreation and circulation – must prevail.

By means of the constitutional recognition of the right to housing, the legislator has expressed his concern over the housing problem and has chosen a policy of urban development that seeks land regularization so that the low-income population can have access to housing.

One of the legal instruments which can be used to make the right to housing viable is urban adverse possession, mainly the collective urban adverse possession, which aims for the land regularization and the urbanization of areas occupied by low-income population.

The collective urban adverse possession implements constitutional values, alters the urban illegality and focuses on urban areas with more than two hundred and fifty square meters, as long as occupied by low-income population for housing, when it is not possible to identify lands occupied by each holder, respecting the precepts of article 183 of the Federal Constitution concerning the length of possession.

The adverse possession in the collective form has adapted the constitutional law of article 183 to the current reality of the great urban centers and has done so based on the constitutional principle of social function of property, of reducing social inequalities, of eradicating poverty and of the right to housing.

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# INSURGENT URBANISM: ALTERNATIVE MODES OF PRODUCTION AND APPROPRIATION OF URBAN SPACE IN THE OUTSKIRTS OF SAO PAULO

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This paper presents a research on new forms of appropriation of public space through actions that are self-managed and crosscutting to government arrangements, led by decentralized groups, organized so anarchic and horizontal, flexible and situational, which has been called in Brazil as “Urban Collectives”. Because of their critical stance to the status quo and limiting forms of access to urban, these groups propose alternative ways to use, look, plan, discuss, build and inhabit the city, we call: insurgent urbanism. Therefore, this paper seeks to understand the appropriation of public spaces by these groups in the outskirts of Sao Paulo, on the margins of large investments primarily cultural. The aim here is to understand their legitimacy as a social organization, and the public sphere concepts tied to the emergence of these groups in Brazil. In these areas, the key element is the functionality and the potential for organization to fight, argue and claim for public policy for the communities. Thus, this research expects to provide conclusive data not only for the understanding of this experience, but mainly to provide support to the urbanist generates solutions that really meet the demand of the population, respecting cultural differences of each region.

## **Keywords**

Insurgency, Comprehensive Planning, Appropriation of Public Space, Urban Collectives

## **How to Cite**

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## INTRODUCTION

The year 2011 was marked worldwide on account of the popular uprisings, a phenomenon of political, social and technological dimensions that took place in several cities around the globe. In Brazil, in June 2013, thousands of people took to the streets in a multifaceted protest, which began against the increase in city bus fares, but then transmuted into other claims. From the visibility of these public demonstrations, the idea of collective groups have spread geometrically by Brazil, notably guided by intervention works in the urban space, with character of social denunciation. For their critical view to the status quo and limiting forms of access to urban, these forms of association have led their actions guided by the motto of the Maker culture “Do-it-yourself”, defending the citizen role to produce, collaboratively and with creativity, critical attitude and autonomy, the transformation of reality.

This research, still under development, presents an analysis of the recent actions of urban collectives in São Paulo that through alternative proposals to use, look, plan, discuss, build and live, is shedding light on issues of sociability and collective construction of the city. Taking as its starting point the emptying of public space, from the Brazilian historical and political context of the 60s to 80s, the paper aims to provide critical apparatus for creating a narrative that explains the Brazilian urban dynamics since the struggle for urban reform to the production and appropriation of the city from the 2013 demonstrations. We hope to contribute to enlarge the understanding of the contemporary city, revealing the relationship between technology and territory, and its importance to point out positive alternatives to the cities.

## FROM THE EMPTYING OF PUBLIC SPACE TO THE RISE OF “URBAN COLLECTIVES” IN BRAZIL

In Brazil, during the 1980s, there was a deepening of socio spatial inequalities, due to the policy of the 70s and the global restructuring process. The modernization of the period known in Brazil as “developmentalism”, in the 50s, ended up being strangled by tightening the external debt and the inflation intensified as never happened before. The rise in international interest rates since 1979, and the problems of external debt management marked a growth never seen in inflation in the country, and continued to grow year by year. This period became known in Brazil as the “lost decade”, characterized by the decline in investment and GDP growth, the increase in the public deficit, the growth of external and domestic debt, and the inflationary rise. It should be emphasized that the country was under military government.

The military dictatorship in Brazil began with the coup of March 31, 1964, resulting in the removal of the President, João Goulart, and taking power Marshal Castelo Branco. This coup established a military dictatorship in the country, justified by the fear of a communist threat. Such governance conditions constituted obstacles to the formation of a national project that cared about the common interests always rejected. They became also and mainly an obstacle to formation of a modernity project, which include the formation of a rule of law and citizenship as support of a democratic project country. Moreover, the political culture of the military regime transformed the meeting in the public space in a threat, transforming this in a subversive act. Thus, the closing and emptying of public space have contributed to the interruption of the democratic construction process in the 1960s and 70s.

In last years of this regime, Brazil had several problems that, added to the strengthening of social demands since the mid-1970s, have culminated in the development of a wide range of grassroots movements. Thus, from 1974, the regime’s legitimacy crisis reflected the struggle for the return of the rule of law and promoted the beginning of the debate on the human rights issue, making the military government impracticable. In 1983, a campaign for direct elections for the presidency has started and, even if the constitutional amendment was defeated in Congress, a president was elected indirectly and a new way of governing the country has started at this point.

Finally, in 1988, the Congress passed a new constitution for Brazil, applicable to the present day and tried to erase the traces of the military dictatorship, establishing democratic principles in the country.

The aggregation of the urban social movements in favor of the struggle for democracy in the 1980s happened, however, at the same time the country was undergoing a worsening of living conditions in large urban areas. The economic recession coupled with the de-industrialization and the expansion of tertiary activities, the impoverishment of the working classes, the removal of part of the middle and upper class out of the center, and the wide dissemination of crime, accentuated inequality in cities like São Paulo. Over the 1970s, the city experienced an intense process of building the slum, and this became the spatial expression of the inequalities in Brazilian society. The growth rate of slum dwellers, for example, between the years 1973 and 1980 in São Paulo is higher than the growth rate of the whole city in this period.

“The significant concentration of poverty in the Brazilian metropolis has as its expression a dual space: on the one hand, the formal city, which focuses public investments and on the other, the absolute counterpoint, the relegated informal city of equivalent benefits and growing exponentially in urban lawlessness that is exacerbating the social and environmental differences. Insecurity and lawlessness are their genetic components and contribute to the formation of urban spaces without attributes of urbanity.”<sup>1</sup>

In this context, the emergence of popular movements, especially in the suburbs, had as decisive agenda the fight for improvements in living conditions against the growing process of exclusion of urban benefits. The articulation of residents claiming their right to citizenship has permeated different fronts of struggle, such as regularization of illegal settlements, movements for basic infrastructure, for health equipment, etc. These movements, which are multiplying from the 1970s, were closely related to problems of production, distribution and management of commons means of consumption necessary for everyday life. Citizenship claimed by penalized and outraged by the instabilities of a society still in the constitution of a commonwealth, could actually expand up anchored mainly the constitutional rights of equality and participation. The foundation of the People’s Councils, in the 80s, as a legitimate representative of the population, has embodied the consolidation of an effective space for negotiation as opposed to a confrontational policy.

When the globalizing neoliberalism hit the country in the 1990s, the Brazilian State joined the international recommendation of minimal government, giving more space to the ideology and privatist policies<sup>2</sup>, and declining to invest in infrastructure or in social care policies. The introduction of neoliberalism caused an increase in concentration of the elite income, restoring, on the world stage, the privileges of the groups that had diminished their power and income after the Great Depression and World War II. Locally, given the Brazilian historical-political context, neoliberal input and economic opening have resulted not only changes in the production process, management and organization of labor, but in the built space, further accentuating the socio-cultural contrasts<sup>3</sup>.

In this period, the number of shopping centers increased significantly, as well as gated communities, private security and traffic control. The establishment of a fragmented city resulted in disqualification and abandonment of public space, deepening segregation and reducing people to a simplified life in homogeneous cores. The mechanisms of control and surveillance, the bars and the walls separating the private property of the street “create private places within the public city”<sup>4</sup>. The street, place of meeting and dialogue between different, is fundamental to building a culture of tolerance. This detachment tends to subtract positive aspects of urban sociability, which are established in the common living in contact with the other in the sphere of public life. For Sennett<sup>5</sup>, the impossibility of meeting with the unknown and the difference, a condition created in intramural microcities, “the person takes the chance to enrich their insights, experience, and learn to most valuable of all human lessons: the ability to call into question the conditions established in his life”<sup>6</sup>.

However, in the late 1990s, there is a resumption of reconstruction and reinterpretation of public spaces in large Brazilian cities, especially in São Paulo, this time from the perspective of diversity and difference as liberating forces against the remnants of authoritarianism and conservatism. There is a redefinition of the struggle for democracy and citizenship through cultural and political initiatives of different orientations and nature, now stripped of previous narrative models, universalist and totalizing, absolute certainties<sup>7</sup>. For Harvey<sup>8</sup>, in postmodernity nothing eternal configures any human activity. In its bases are fragmentation and ephemerality, which constitute the chaos and some unreasonableness dictated by multiple, by nomadism and difference.

It is in this perspective that arise new forms of appropriation of public space by self-managed and crosscutting to government arrangements, led by decentralized groups, organized so anarchic and horizontal, flexible and situational, which has been called in Brazil as “Urban Collectives”. Armed with a conceptually oriented vocabulary to propose more imaginative, sensitive and dynamic ways for urban living, Collectives appropriate themselves from the city, opposing to the territory making process from the projection of fear and violence<sup>9</sup>. Thus, the popular uprisings, the resumption of the streets and the redefinition of public space appear as a search for the right to the city and for a more human city, inclusive, safe, healthy, and with livable streets<sup>10</sup>.

## THE INSURGENT CITY: STRATEGIES OF TODAY’S URBAN COLLECTIVES

According to Castells<sup>11</sup>, the technological revolution, focusing on information technology, began to reshape the material basis of society and therefore the urban space. It is through the use and appropriation of Internet tools and other new technologies of information and communication that Collectives articulate and make politic, that is, there is a powerful link between the so-called “cyberspace” and the real world (physical and territorial space) in the forms of action and organizing collective. The network logic defined collaboratively and without evident leaders, it drives the production and actions of these groups.

This form of grouping, although typical of the work of young visual artists, has been conducting interventions in urban space. This urban character, however, differs from the expression traditionally used by hip-hop culture. One can see, then, that the form of collective action is significantly different from those of the last century, mainly due to the postmodern condition as a new version of the experience of space and time, according to Harvey<sup>12</sup>. This wave of space-time compression implies an inevitable acceleration of *modi vivendi*, that is, there is a volatile and ephemeral character in production, labor processes, and even the ideas. Volatility is its flow and thus they reject the idea of projects in the long or medium term. There is a certain nomadism within these structures; so the participant can move to another group when the project is done, essentially because a Collective is not configured by its members but by its actions. The ephemerality and fragmentation lead these unions, because they understand immediate action and tactics are required in the context of public intervention. They differ, therefore, from the 60s and 70s actions, when groups were organized in cooperatives or unions, guided strictly by closed and well defined agendas.

“There is not much difference from the point of view of the multitude and all the other movements that are born of the needs of basic or fundamental desires to live and produce. But there is another element that is the uniqueness. When the multitude moves, it is never simply a mass, it is a plural wealth of life questioning elements. Of course, here comes an organizational problem. There is a great unity problem, of movement’s coordination, among many singularities. But this is also the richness, the beauty of the process which we are living.”<sup>13</sup>

The rhizome and nomadic character of Collectives allows an artist/activist belonging to more than one group simultaneously for different projects. This feature, added to its form of independent, enables unusual connections for co-creation, through juxtaposition and collision, which redraw other possible dimensions of existence, highlighting the concern with otherness and other worlds that coexist. In the fragmented and splintered world,



it is possible that all the worlds happen without privilege one over the other<sup>14</sup>. Therefore, his open constituent process causes an explosion of singularities, far from the modern conception of a unique way as a form of resistance to the dominant powers, or rather, the modern concept of unity. Distance themselves from the setting of a party or any fixed structure of organization, even if this uninterrupted open relationship of singularities in motion - that make up the multitude to Negri<sup>15</sup>, composes strategies to undermine authoritarian proposals using common action opposite to crisis. For Negri<sup>16</sup>, narrowing between being social and political power is due to the conditions given by the nature of the contemporary crisis, the transition to political postmodernity, although not resulting in a unit.

Spontaneous interventions or ephemeral architectures, ie, purposeful urban micro-interventions promoted by these groups represent demands and emergencies led by the citizen as an essential agent in the city production dynamic. It is called tactical, guerrilla or insurgent urbanism, which suggests other perspectives to the city and its contemporary everyday problems. Understanding the city as an open platform to constantly be made from the perspective of the public interest has guided this mix of actions, behaviors and atypical meanings to develop a distinct spatiality of those provided by law and by traditional practices. The regulatory framework that provides for the use and occupation of the land - and public space, often end up cluttering the emergence of innovative initiatives for the creation and use of built space. This is because it understands the space from the unique perspective of the modern world, entrenched in strong convictions, and does not include the dialectic caused by actions that realize the space from the multiplicities of possible layers. Often, government practices tied to atavistic bureaucratic processes favor the abandonment cycle and activity restriction of public open spaces, helping to maintain fear and urban violence within the city.

Precisely because of the aspect that challenged the prevailing cultural and spatial model, Collectives approach their actions to the hacker culture, or hacking, understood as the creation of a smart shortcut that results in a new resource for a tool. The term, consolidated in the 60 to set computer experts involved in a type of programming subculture, meets the contemporary activist interventions in the public space of inventive character, and fast alternative to catalyze civic coexistence.

Collectives act to scramble existing codes, producing a movement around them and, from nomadism perspective, they escape from territoriality. In many ways, their tactics are answers to the slow process of city transformation guided by the official structures, because the Collectives work from the real urgency. They operate from a small adaptation of public space, invasive or not, and assuming that the street is the space of all, these groups generally do not ask for authorization or permission of the local government for their interventions. So, these reclamation, redesign, or reprogramming of public space occur on a small scale and seek flexible and reversible solutions, or more adjustable conditions for inevitable change, considering that places are not static.



FIGURE 1 Minhocão Playground by Basurama. In 2013, the collective built a playground in the middle of downtown area that could be enjoyed for free and can be replicated elsewhere. Accessed in January 2016.

Normally, Collectives promote educational profile initiatives by offering courses and services related to artistic production, not only to promote community empowerment, but also as a way to seek sponsorship for the activities realization. An example of this is the Basurama group, acting since 2007 in São Paulo, whose works are developed with discarded materials to articulate urbanism and ecology with educational activities. Another aspect of self-management is that it tends to eliminate the authority traditionally centralizes the selection and decision on the artistic production, represented by the figure of the art curator. The group Baixo Centro, for example, a collaborative, horizontal and independent movement that emerged in 2011 with the proposal to reframe the central region of São Paulo, especially around the Minhocão (a high street that cuts a large portion of the central area, comprising the districts of Santa Cecilia, Vila Buarque, Campos Elíseos, Barra Funda and Luz). The movement was structured around a street festival held by an open network of producers interested in this region and has as its motto “the streets are to dance”. Because of its self-managed character, the Festival opens public calls for people and groups enroll their ideas and what they will need to perform them. Then the group does the “cuidadoria”, i.e. take care of the projects looking for means to support them collaboratively through crowdfunding and/or other independent forms of storage.

All experimentations of urban practice from everyday life perspective invite us to a debate on site resilience, understood as the ability of citizens to deal with problems and overcome obstacles together, considering the importance of history and symbols for the local community, or rather, places storytelling. Still, they help us think about agile and inexpensive approaches to the production of space, which can result in long-term changes or urban policies more comprehensive.



FIGURE 2 Baixo Centro Festival. The photo shows the occupation of the streets for the festival, which promoted several activities in Minhocão by using artistic interventions such as painting the streets and cover them with artificial grass. On the street it is written “what city I want to be”. Accessed in January 2016.

## TACTICAL ACTIONS IN SAO PAULO

In São Paulo, the tactical urbanism<sup>17</sup> has been practiced mostly by designers, artists and architects, who also give priority to the visual aspect of the intervention projects. Their actions are more often found in the axis Center-West Zone of São Paulo, place of residence or work of most of these people. However, one can notice the growth of associative and horizontal movements in the more peripheral areas of the city, such as the northern and eastern areas, especially by groups that are on the margins of major investments, especially in the cultural sector. In these areas, the key element is the functionality as well as the potential of the organization to fight, argue and claim for public policies for communities. Importantly, the southern outskirts of the city of São Paulo, around 1995, stood out on the national scene because of activism led by rappers groups dealing with the black condition and crime in the slums in Brazil. Areas such as the Capão Redondo neighborhood were considered centers of diffusion of hip-hop culture and guided the political and cultural reconfiguration the south periphery of São Paulo. Therefore, this portion of the city continues, even today, to share an intense activist movement, making the practical consciousness of local residents. Then, we chose not involve this area both because it is already well mapped and because activism seems consolidated there, focusing the study on the East and North zones of São Paulo.

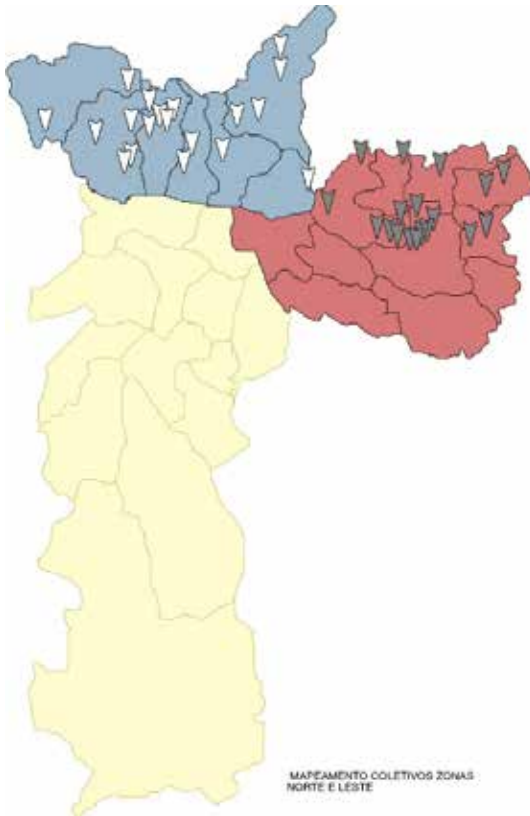


FIGURE 3 East and North zones of São Paulo. This research focuses on the peripheral areas of North and East zones because they are territories “off-axis” of the government investment. This map provides an overview of all groups found.

The research, still under development, addresses the recovery of public space in recent years from groups who organize themselves through digital platforms. The interest in mapping Collectives in the peripheral areas is to understand their conceptual motivations, their actions and tactics, to discover similarities and differences in relation to actions in the most valued axis of the city, Center-West zones, which are traditional territories of the São Paulo alternative culture. Added to this, the understanding and discussion of the dimensions of public, private and common spaces in these regions, as well as the theme of violence and socio-spatial segregation, as important keys to understand the context related to the creation, appropriation and maintenance of the territory on the outskirts of São Paulo. Thus, the research seeks to covers the differences and specificities of each Collective, as a kind of observatory to monitor collaborative actions in territories “off-axis” of the government investment and to understand differences between these actions and those that occur in the most valued axis of the city.

From the theoretical framework, we found a set of elements or components from which the interventions will be analyzed. We have already summarized them in the following aspects: i) Functional, in terms of their ability to articulate civic coexistence; ii) Social, for their effective use by the local community, including here the dimensions of management, use and autonomy; iii) Formal, in terms of physical size of the intervention; and iv) Symbolic, involving the importance of history and places storytelling involved by the actions. These perspectives of understanding point to problems associated, namely: a) understanding the role of technology as a means of articulation and / or as a work process; b) the mode of intervention in the public space, with respect to time and scale; and c) the collective field of action, whether local or itinerant. Finally, we will relate the mapping with the data collected from these filters described above.

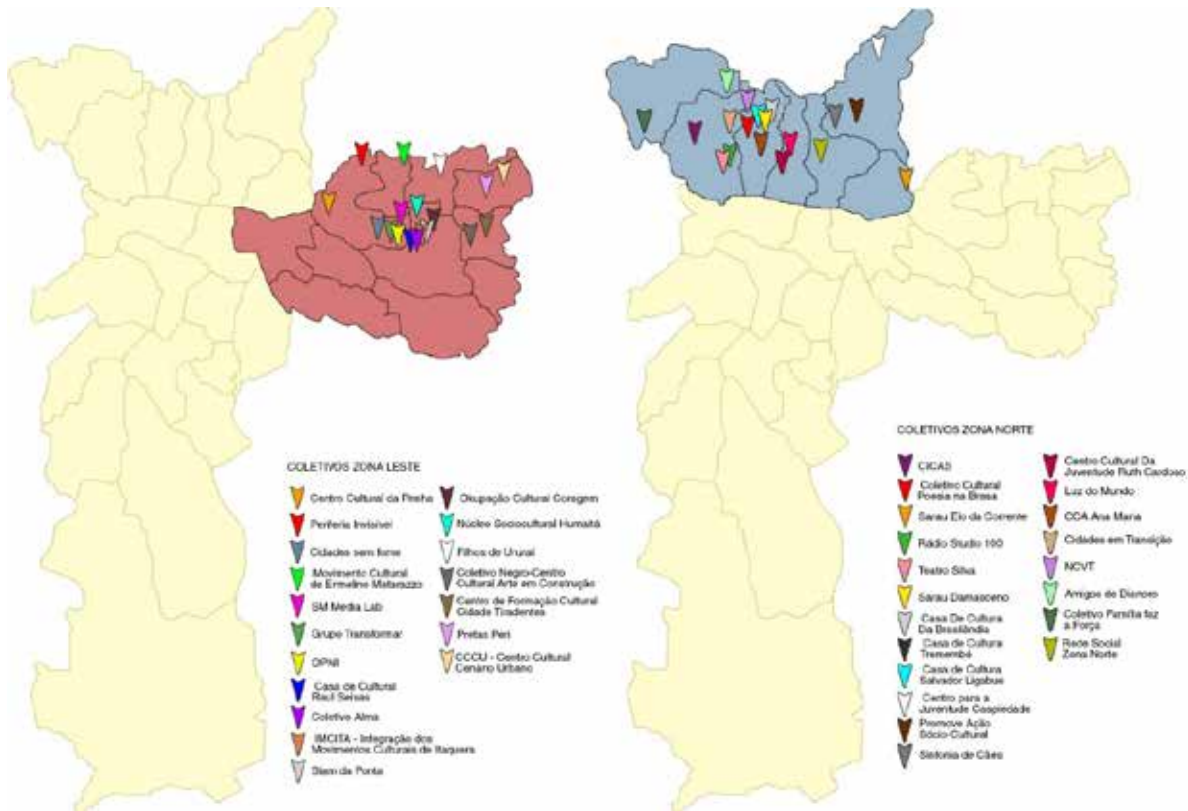


FIGURE 4 Collectives from North and East zones of São Paulo. This map summarize the first data collection. The legend indicates each collective and its specificity.

The first results indicate that the activities of collectives in the North and East Zones cover topics such as environmental education, literature / poetry, vegetarian food / vegan, dance, theater, music and street art. They work with spontaneous or ephemeral interventions based on experimentation, treating the city as a laboratory to reveal the potential of spaces previously discredited. In general, culture acts as the element of politic articulation. An example is the development of the Periphery Development Act - PL 624/2015, formulated by the Cultural Movement of the Peripheries, from dialogs with the community in order to demand greater investment in culture in these regions. According to them, the public subsidy programs to artists on the periphery are not sufficient to meet the existing demand, and the scope of their crowdfunding is lower. To expand the funds invested by the municipality, in 2012 the group drafted a bill to force investments through municipal public policy. The fight is being led by the articulation of various Collectives of the East zone and they organized a survey on what were the most urgent guidelines on the outskirts. In 2015, they obtained some achievements and in 2016 the law should be voted on in the House of councilors.

## FINAL CONSIDERATIONS

The Collective movement is international and the theme has been gaining strength since the 1990s. The concept of “tactical urbanism” became popular in the US in 2010 when it was used in a debate on the transformation of Times Square in a space only for pedestrians. In 2011, UN-Habitat adopted a resolution on sustainable urban development through access to quality public spaces. Since then, urban initiatives that aim to promote urbanity has been constantly discussed around the world<sup>18</sup>. In Brazil, the Institute of Architects (IAB) held since 1993, the Urban Kindness Award, a prize to incentive small attitudes of citizens who work to make everyday life in cities better. The UN-HABITAT Conference 2015 discussed the theme “Public Spaces”, focusing precisely on the issue of Collective´s microactions. The importance of the issue is unquestionable, since the resumption of the streets by people is essential to avoid the collapse of the cities. The conference recommendation is to understand the power of these movements for local development, revealing the potential of spaces until now condemned.

How we pointed out, we do not have a long history of using public spaces, and to be in a common area requires practice and habit. That´s why the recovery of public spaces by the citizens in Brazil, nowadays, represents the main insurgency struggles and demands, especially in a large proportions city and as complex as São Paulo. So, this type of data collection is essential not only for understanding experiences in the peripheral areas of São Paulo, but mainly to provide support to the architect and urban planner´s work in creating solutions that really meet the demand of the population, respecting cultural differences and projects already underway.

### Disclosure Statement

No potential conflict of interest was reported by the author.

### Notes on contributor(s)

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### Endnotes

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## Image sources

Figure 1: Minhocão Playground by Basurama Collective, available in: <http://basurama.org/pt-br/projetos/parque-de-diversoes-minhocao-2/>

Figure 2: Photo by Tiago Queiroz, available in: <http://noticias.r7.com/sao-paulo/noticias/festival-do-baixo-centro-reune-atracoes-no-michocao-20120401.html>

Figure 3: Map produced by the research group.

Figure 4: Map produced by the research group, from the collected data.





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# Rebuilding and Renewal

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Chair: Harald Kegler



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# A HISTORY OF VISIONS AND PLANS FOR THE TRANSFORMATION OF A COASTAL TOURISM CITY INTO A KNOWLEDGE CITY: AUSTRALIA'S GOLD COAST

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Bond University

Many coastal mass tourism centres have attempted to reinvent themselves as they have grown from informal coastal towns into large cities. Lifestyle migration boosts urban growth as these cities become home to 'permanent tourists' attracted by the characteristics that attract tourism. Australia's best known resort, the Queensland Gold Coast, provides a case study of a resort region experiencing similar transformations to those noted in Honolulu, Miami and Sitges, Spain. These cities have pursued broader socioeconomic resilience rather than the common strategy of simply expanding or improving their tourism appeal. Using literature review and documentary research, this paper traces how ideas of a 'knowledge city' have featured in Gold Coast planning history since the 1980s, through proposals including an 'innovation corridor', 'research triangle', a designated knowledge precinct and the development of universities and hospitals under plans and strategies for economic development. Although implementation has been sporadic, the case study demonstrates a continuity in narrative that has shaped outcomes towards the desired 'knowledge city', thereby creating a more cohesive urban structure integrating knowledge nodes, town centres and urban transport infrastructure investments. This case study will add knowledge to inform planners grappling with the transformation of similar coastal tourism areas into significant cities.

## **Keywords**

knowledge based urban development (KBUD), Gold Coast, coastal tourism city, knowledge city, health and knowledge precincts.

## **How to Cite**

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DOI: <http://dx.doi.org/10.7480/iphs.2016.2.1242>

## INTRODUCTION

The Gold Coast in Queensland, Australia, is a city of almost 600,000 people that has emerged from the amalgamation and rapid growth of a series of coastal resort areas and rural towns founded in the late nineteenth century<sup>1</sup>. The city became Australia's best known coastal tourism resort area after World War Two, pursuing similar paths of amplification and diversification of its tourism offer to those implemented in international coastal mass tourism resorts, such as the addition of theme parks and events<sup>2</sup>. It has grown to become the nation's sixth largest city in its own right, as well as merging with the expanding city region of South East Queensland around the state capital of Brisbane. Since at least the 1980s, the growth of the Gold Coast resident population has been accompanied by calls for greater economic resilience through the widening of the economic base of this tourism and lifestyle based city.

Using literature review and documentary research, this paper traces how ideas of a 'knowledge city' have featured in the city's development narrative and planning history since the 1980s, through public and private sector proposals including an 'innovation corridor', a designated health and knowledge precinct, a 'research triangle', and the development of universities, hospitals and research precincts under state and local government plans and strategies for economic development, city culture and transport.

The analytical framework of the paper is to explore how ideas of knowledge based urban development (KBUD) have been developed and/or adopted in efforts to transition the Gold Coast from a narrow economic focus on tourism and construction to a more resilient and diversified economy. This paper thus seeks to investigate how KBUD ideas have been used to reposition the Gold Coast as a resilient coastal mass tourism city whose socioeconomic future and character will be broader than just being based on tourism. Definitions of KBUD are surprisingly elusive and tentative in the literature, though the best attempts are made by Yigitcanlar, who notes that innovative cities were beginning to adopt KBUD by 2005 as "a development strategy tool for enhancing the competitiveness of cities within the context of expanding [the] knowledge-based economy and society, and forming prosperous knowledge cities"<sup>3</sup>. The literature celebrates the knowledge economy as a source of prosperity and identity for knowledge cities and knowledge regions and these terms seem to be used interchangeably with 'creative cities' and 'creative regions'. The openness of definition is useful to the current investigation of how such ideas have been employed in the case of the transformation of the coastal mass tourism city of Gold Coast.

## MATURE COASTAL MASS TOURISM CITIES IN TRANSITION

Internationally, many centres of coastal mass tourism have experienced a need to diversify in order to remain economically sustainable. Much of the literature to date has dealt with how such centres diversify in terms of their tourism product, for example appealing to different markets by introducing new tourist attractions, or meeting the challenge of adapting to climate change<sup>4</sup>. Well-known coastal resort towns have found it necessary to redefine and reimagine themselves as they have grown from informal coastal towns into larger cities and city regions. For example, Miami and Honolulu have grown into major cities in which tourism is just one element of the economic and social life of a city region. Similarly, the resort town of Sitges, on the Costa Brava, has become part of the broader metropolitan region supporting Barcelona as the Catalan capital<sup>5</sup>. Lifestyle migration boosts the urban growth of these expanding cities as they become home to 'permanent tourists' attracted by similar destination characteristics to those that attract regular tourists on holidays.

There has been considerable research interest in how tourism has been introduced into pre-existing coastal cities whose traditional economic base was declining – as in many Greek coastal ports and industrial cities<sup>6</sup> and fishing villages of the Mediterranean and other coastal zones throughout the world. There has been less academic research on those coastal settlements that have grown into cities based on tourism and then sought to diversify

their economies beyond tourism and construction in the interests of long-term economic and social resilience – though Miami was noted as having transformed from tourist resort to ‘real’ city with ‘global city’ characteristics as early as the 1980s<sup>7</sup>. Consideration of life-cycle models of mature coastal tourism resorts, such as Butler’s 1980 Tourist Area Life Cycle Model, seems to continue the focus on tourism rather than on more diverse socioeconomic futures for these cities<sup>8</sup>. Baum’s proposed mature stage of “reinvention”, with the option of a coastal resort city “taking the exit route” from tourism dependency, remains a rare exception<sup>9</sup>. Its implications of tourism decline and total economic transformation have little relevance to the current case study or to the international examples mentioned above.

More recently, claims have been made that international coastal mass tourism destinations have great potential to generate “creative capital” and thereby become cities of innovation<sup>10</sup>. The current paper presents an Australian case study of a growing coastal tourism city seeking to transition to a more sustainable economy based on KBUD to underpin the tourism and lifestyle migration that spurred its rapid growth in the past half-century.

## **EMERGING VISIONS OF THE GOLD COAST AS A KNOWLEDGE CITY IN THE 1980S: THE BIRTH OF THE FIRST UNIVERSITY AND RESEARCH PARK, AND AN ABORTED TECHNOPSIS**

The idea of injecting knowledge into the city’s economy underpinned intense lobbying for the establishment of a university on the Gold Coast. In a country with no tradition of private universities, and lack of government interest in establishing a public university on the Gold Coast at that time, Australia’s first private university, Bond University was founded in 1989 with initial funding by entrepreneur Alan Bond and the Japanese investor, EIE. A ‘technology park’ was designated immediately adjacent to Bond University and the first ‘technology park’ premises were established and privately let to technology entrepreneurs<sup>11</sup>. The Bond University research park bore similarities to ideas of technology parks and office parks that were current in the United States<sup>12</sup> and emerging in Australia in the 1980s (for example the area adjoining Sydney’s Macquarie University). The Bond University technology park provided lettable space for start-up research firms in close association with the university and with residential accommodation for students, researchers and other technology workers rather than fully replicating the single-use, isolated office park model.

Property development consultant Brian Orr had raised the idea of founding Australia’s first private university on the Gold Coast in 1976<sup>13</sup>, but it was another decade until the idea gained wider support, most significantly from the nationally known entrepreneur Alan Bond, who had been unsuccessful in a 1970s bid to establish a private university as part of his new urban development, Yanchep Sun City in Western Australia. In 1984, Albert Shire Council<sup>14</sup> advertised for community support for a local public university, and key advocates of the eventual private Bond University became active community lobbyists for a university. The community lobbying coalesced with Orr’s preparation of a Bond University of Applied Technology proposal in 1986, and widened to gain government support leading to the opening of Bond University in 1989. From the outset, it was intended that the university be developed in conjunction with an industrial park, hospital and joint research facilities – in other words, a knowledge precinct rather than an isolated university campus.

Progress towards the opening of Bond University was breathtakingly rapid. The Queensland Premier announced the state government’s support for the university in 1986, and the university opened in 1989 following the formation of a legal entity by the founding partners, the securing of finance, approval by three levels of government and the design and construction of the main campus buildings and the first stage of the technology park. The University was immediately beset by financial troubles in the 1990s recession, resulting in the undeveloped technology land eventually being sold to national developers, Delfin Lend Lease, who developed the transit oriented new neighbourhood of Varsity Lakes during the decade commencing in 1998, belatedly realising many of the originally intended knowledge precinct benefits. Figure 1 provides an aerial view of Bond University and Varsity Lakes.

Another early formal occurrence of the idea of a knowledge city on the Gold Coast was an aborted concept for a “Multifunction Polis” (MFP) on the northern Gold Coast in the period 1987-1990 (Burchill 2005). A Gold Coast consortium of property developers joined with the local and state government in a bid lodged in response to a call by the Australian (Federal) Government for a new city to be funded by Japanese investment through Japan’s Ministry of International Trade and Industry (MITI). The Queensland government put forward the consortium’s plan for a “technopolis” on a 3200 hectare greenfields site at Coomera on the northern Gold Coast. The Gold Coast MFP proposal was the most northerly node of a contemporaneous five-node knowledge corridor proposal for the developing 70 kilometre linear city, formulated by the Gold Coast 2020 Syndicate, a collaboration between local government representatives, universities, business and development associations and interested citizens.<sup>15</sup> This five-node knowledge corridor was clearly a precursor to the 1990s Pacific Innovation Corridor strategy discussed below.

The federal government rejected the Gold Coast MFP proposal in favour of one from the South Australian government located in Adelaide’s outer northern suburbs. There are allegations of federal government “prejudice about Gold Coast land owners and developers” with its reputation as the domain of “the white shoe brigade”<sup>16</sup>, but this complaint overlooks the structural economic challenges facing South Australia’s manufacturing sector as a result of globalisation. With the decline of the Japanese economy in the early 1990s, together with a major economic recession in Australia at that time, the Adelaide proposal was ultimately watered down into a smaller ‘knowledge precinct’ around a new campus of the University of South Australia at Mawson Lakes – ironically developed in the decade around 2000 by the same developer as Varsity Lakes.

The first public university on the Gold Coast was established as a campus of the Brisbane-based Griffith University in 1990. For many years, this campus remained as an isolated single-purpose destination inland from the declining traditional administrative centre of Southport, until the formation of the Gold Coast Health and Knowledge Precinct described below.

It is significant that these early visions and plans for knowledge development in the Gold Coast were emerging when the city’s population was growing rapidly from about 162,000 at the 1981 census to 270,000 by the 1991 census<sup>17</sup> (and which had doubled by the 2011 census).



FIGURE 1 Bond University and Varsity Lakes

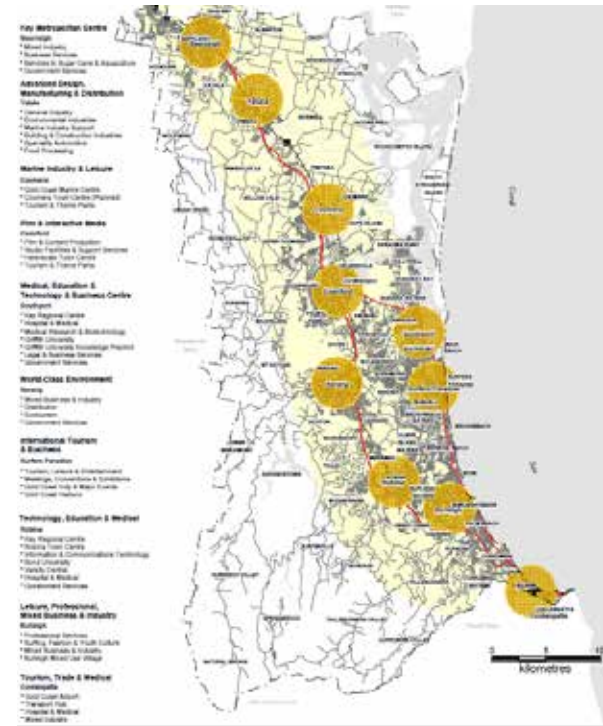


FIGURE 2 Pacific Innovation Corridor (PIC)

## INTO THE TWENTY-FIRST CENTURY: CONCEPTUALISING AND IMPLEMENTING A SMART STATE, INNOVATION CORRIDOR AND RESEARCH TRIANGLE

The Queensland Government introduced a ‘Smart State’ policy via a series of policy documents between 1998 and 2005<sup>18</sup>, aimed at transitioning the state towards a knowledge economy. The Smart State suite of initiatives took on an urban and regional expression with support for the “development of technology incubators, parks and precincts”<sup>19 20</sup>.

In parallel with the Smart State strategy, in 1998 Gold Coast business leaders drew on the knowledge developed in the MFP proposal, and joined with academics and State Government regional directors in a group to promote a Pacific Innovation Corridor (PIC) on the Gold Coast, expanding on the five-node knowledge corridor mentioned above<sup>21</sup>. The PIC became Council policy in its 2003 Economic Development Strategy, and was incorporated into the Gold Coast Planning Scheme 2003 (see Figure 2). The corridor designation sought to build on nascent strengths by grouping creative industries, innovative businesses and health and knowledge infrastructure in ten clusters spread along the two main north-south transport corridors serviced by the Pacific Highway, Gold Coast Highway, Gold Coast Railway and future public transport extension routes. While some claim a major benefit of the PIC was to expedite ICT investment along the corridor by government and private industry, the PIC was also criticised for failing to generate any significant knowledge industry outcomes<sup>22</sup>. The following initiative, the Gold Coast Health and Knowledge Precinct, constitutes an important element of the implementation of the PIC and counters the early criticism in relation to the key Southport knowledge node.

In the early 2000s, the Queensland government and Gold Coast City Council announced plans to consolidate health and knowledge infrastructure around the formerly stand-alone campus of Griffith University. Plans for the 200 hectare Gold Coast Health and Knowledge Precinct (GCHKP) co-locate Griffith University, the new Gold Coast University Hospital (opened 2013)<sup>23</sup>, a private hospital (opened 2016), a selective health science-oriented senior

public high school (opened 2008), various research institutes, a mixed-use residential community for health and knowledge workers (opening 2018), and the first stage of the Gold Coast Light Rail (opened 2014)<sup>24</sup>.

Realisation of the vision and plans for a GCHKP has been able to be expedited through the development of the mixed use residential precinct initially as the Commonwealth Games Village for the 2018 Commonwealth Games which are to be hosted in the city. 1252 apartments and townhouses are currently being privately developed for this purpose on seven hectares, with an adjacent seven hectares of open space (Figure 3). After the Games, the site will play a key role in the Knowledge Precinct when it will provide business premises, research facilities, interaction spaces and housing for knowledge workers<sup>25</sup>.

Researchers have drawn attention to a tendency in the boosterist rhetoric of Gold Coast City Council and the Queensland government to highlight only the GCHKP around the biggest local university and hospital, rather than recognising the broader research “network” or ‘triangle’ based around three groupings of universities, hospitals and adjacent town centres within the coastal sprawl of the Gold Coast<sup>26</sup>. This deficiency was soon to be addressed to some extent in collaborative planning by the City of Gold Coast and local business leaders.

In 2013, the City of Gold Coast released an updated *Economic Development Strategy 2013-2023*. The new strategy sought to “bring back the ‘have a go’ spirit” that underpinned earlier decades of Gold Coast development, and which resulted in achievements such as the rapid establishment of Bond University in the 1980s<sup>27</sup>. The clarity and boldness of the PIC is not continued into the 2013 Economic Development Strategy, although elements of it are carried through and/or rebadged – notably the advanced design, manufacturing and distribution hub at Yatala in the north, the GCHKP at Southport, and the tourism trade hub around the Gold Coast Airport at Coolangatta in the south. The GCHKP is identified as a signature project, “a globally competitive precinct driving knowledge, innovation and commercialisation”<sup>28</sup>. A “university research triangle” is identified in the strategy, with the GCHKP around Griffith University at the northern corner, Bond University at the central corner, and Southern Cross University at the third, southern corner at Gold Coast Airport. The inclusion of the research triangle nominally addresses earlier criticism of the focus on a single knowledge precinct (GCHKP) when the Gold Coast has two other potentially significant health and knowledge clusters<sup>29</sup>. While this lack of balance, and lack of detailed strategies for two corners of the university research triangle is disappointing, the concept has been incorporated in City Plan 2015 with a greater level of detail. For example, under the Strategic Intent of “Globally Competitive Economy”, the Plan “will protect existing business and economic areas and provide capacity for expansion and growth of business and economic development and investment into the city by [among other things] promoting and facilitating knowledge, innovation and commercialisation activities in the city’s Research Triangle, including Griffith University/Gold Coast Health and Knowledge Precinct, Bond University/Varsity Central and the Southern Cross University/Gold Coast Airport”<sup>30</sup>. Specific outcomes for “making modern centres” are identified for the centres around which two of the three universities are located (Southport and Robina), and the plan recognises the importance of improved public transport, a significant cultural centre and high quality public open space to the achievement of the research related outcomes<sup>31</sup>.

The single GCHKP is an important first step, but if this sprawling polycentric city region is to truly diversify its economic base, identity and the opportunities available to residents, it will need to pursue the ‘knowledge triangle’ ideas to realise a network of knowledge nodes to create a cohesive and productive urban structure linking its three university campuses, several hospitals (both public and private), town centres and expanded public and active transport infrastructure.





FIGURE 3 Gold Coast Health and Knowledge Precinct (GCHKP) under construction adjacent to Gold Coast University Hospital in 2016. The precinct will initially be used as the Commonwealth Games Village when the Gold Coast hosts the Games in 2018.

## CONCLUSION: RECONCEPTUALISING THE GOLD COAST AS A KNOWLEDGE CITY

The qualities that continue to attract tourists to the Gold Coast – the natural environment, beaches, subtropical climate, recreational opportunities and relaxed lifestyle – have attracted the major population growth of the past half century. Just as permanent residents have been attracted by these qualities, the availability of these qualities can be expected to add to the attractiveness of the Gold Coast's new knowledge precincts to knowledge workers.

This paper has shown that visions of the Gold Coast as a knowledge based city began to be formulated on a number of fronts in the 1980s, at a time when the current city of over half a million residents had a population of only around 200,000. Further planning and implementation for this new vision of the Gold Coast has proceeded at an uneven pace. Bond University, the first university on the Gold Coast, having been conceived only in 1986, opened as Australia's first private not for profit university in 1989. The speed of this achievement is an example of the "have a go' spirit" that exemplified the Gold Coast during its post-war growth<sup>32</sup>. Elements of the adjacent Bond University 'technology park' opened simultaneously, but the 'knowledge based' and 'transit oriented' Varsity Lakes community took another decade to be planned and then progressively developed in the early 2000s. The delay, although financially painful for Bond University, enabled Varsity Lakes to take on a more integrated 'transit oriented development' form rather than the 1970s 'science park' ideas that informed its conception.

The Gold Coast's second university, a local campus of then Brisbane based Griffith University, quickly followed in 1980, reassuring the advocates of a more broadly based Gold Coast that their vision was a realistic one. It remained a stand-alone campus for thirty years until the creation of the surrounding Gold Coast Health and Knowledge Precinct incorporating major public and private hospitals and supportive urban development and public transport infrastructure. The challenge now is to develop the other corners of the 'research triangle' into significant knowledge nodes.

There has been continuity and persistence by the public and private sector advocates of a Gold Coast knowledge city and key foundations have now been established in this first generation of the idea. Together with the implementation of the first stages of an urban light rail network by 2014, after first being mentioned in planning

documents only in 1998, these achievements show that the Gold Coast's reputation for bold innovation is indeed intact. This innovation culture has moved from showy developments and boosterist promotions to a more sophisticated level through the conception and implementation of these city building proposals.

Although implementation has been sporadic, the case study demonstrates a continuity in narrative that has shaped outcomes towards the desired 'knowledge city', thereby creating a more cohesive and resilient urban structure integrating knowledge nodes, town centres and urban transport infrastructure investments. This case study will add knowledge to inform planners grappling with the transformation of similar coastal tourism areas into significant cities and city regions. It is hoped that future research will include comparative international case studies of coastal mass tourism cities that broaden their socioeconomic resilience beyond tourism to include knowledge based urban development.

### Disclosure statement

The author is employed by Bond University as Associate Professor Urban Planning.

### Notes on contributor

Dr Daniel O'Hare is Associate Professor Urban Planning in the Faculty of Society and Design at Bond University. He holds a PhD and MA in Urban Design from Oxford Brookes University, UK, and a Bachelor of Town Planning (Hons, Medal) from UNSW Australia. Before coming to Bond, he co-ordinated the postgraduate Urban Design Program at QUT from 1993-2006. His main research interests are the transformation of coastal tourism areas into sustainable city regions; cultural landscape interpretation and management; and urban design for walkable cities.

### Endnotes

- 1 Bosman et al. 2016 provide a comprehensive picture of the urbanisation of this 'off the plan' city, showing how, for most of its history, Gold Coast planning has been private development-oriented and characterised by a strong laissez faire ethos.
- 2 cf Bramwell 2004; Ivars et al 2013
- 3 Yigitcanlar 2011: 389
- 4 Bramwell 2004; Agarwal and Shaw 2007; Jones and Phillips 2010
- 5 Campillo-Besses et al 2004
- 6 Economou and Vrassida 2005
- 7 Sassen and Portes 1993:473
- 8 eg Ivars et al. 2013
- 9 Baum 1998, in Butler 2011
- 10 Romero-Padilla et al. 2016
- 11 Cracknell 1994; Saunders 2014
- 12 Rowe 1991
- 13 Saunders 2014 is the source of information on the establishment of Bond University.
- 14 Albert Shire, covering the Gold Coast's inland areas, was amalgamated into Gold Coast City Council in 1994. Albert Shire's early interest in a university is noted in Saunders 2014.
- 15 Information here is from Burchill 2005. Research of local archives is necessary to establish exact dates and sequence of these early knowledge city ideas.
- 16 see Burchill 2005: 334
- 17 These census figures are cited in Saunders 2014 and Stimson and Minnery 1998 respectively.
- 18 Mort and Roan 2003; Couchman et al. 2008.
- 19 Queensland Innovation Council 2001
- 20 The first statutory *South East Queensland Regional Plan (2005)* for the region based around the state capital, Brisbane, aimed to "support existing and emerging clusters of science, innovation, and research and development" by designating 14 "knowledge hubs", including Griffith and Bond Universities in the City of Gold Coast (as cited in O'Hare et al 2012). These ideas were carried through in the updated *SEQRP 2009-2031* with greater recognition of the health component of the knowledge sector.
- 21 Burchill 2005
- 22 Burchill 2005 is positive while Couchman et al. 2008 are scathing in their (perhaps premature) criticism.
- 23 "Australia's first University-named hospital", according to the State Premier's media announcement of the opening of the new public hospital on 30 October 2013.
- 24 City of Gold Coast, Queensland Government and Griffith University (nd) GCHKP fact sheet.
- 25 Queensland Government Department of State Development, Commonwealth Games Village, accessed 5 April 2016 at <http://www.statedevelopment.qld.gov.au/index.php/major-projects/venues/gold-coast-2018-commonwealth-games/1062-commonwealth-games-village>.

- 26 O'Hare et al 2012
- 27 The decline of that spirit was a theme of lament in Burchill 2005.
- 28 Gold Coast Economic Development Strategy 2013-2023, p15.
- 29 O'Hare et al. 2012.
- 30 Gold Coast City Plan 2015 version 2, section 3.2.3.
- 31 This aspect of City Plan 2015 is in line with the arguments contained in the literature of creative cities and the knowledge economy.
- 32 The 'have a go' spirit behind the rapid urban growth of the Gold Coast is noted by Bosman et al. 2016, in *Off the Plan*, as a key aspect of the city's historically laissez faire approach to planning driven by the property development industry.

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## Image sources

- Figure 1: Bond University, c2006 (with permission).
- Figure 2: Gold Coast City Planning Scheme 2003 (amended 2009).
- Figure 3: Daniel O'Hare, May 2016.



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# NEIGHBOURHOOD REGENERATION IN ISTANBUL: FROM EARTHQUAKE MITIGATION TO PLANNED DISPLACEMENT AND GENTRIFICATION

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The paper analyses the development of neighbourhood regeneration in Istanbul since the 1999 Marmara earthquake, contrasting initial concepts and policy recommendations with actual policies and outcomes. An historical analysis of Turkish urbanisation identifies the specific characteristics which have influenced a shift from the concept of neighbourhood regeneration as earthquake mitigation to private sector-led redevelopment which fails to target earthquake vulnerable neighbourhoods but delivers planned gentrification. The analysis identifies three phases in the recent emergence of neighbourhood regeneration in Istanbul. The first was a series of studies and pilot projects which established the key components of a Turkish model of earthquake resilient redevelopment of poor neighbourhoods, with minimum gentrification. The second was dominated by the implementation of pioneering projects with controversial gentrification outcomes. The 2012 Urban Regeneration Law has established the parameters of the third phase dominated by the launch of a national programme. This evolutionary process is illustrated by a case study of Bağcılar. The paper concludes that the challenges of neighbourhood regeneration are rooted in Turkey specific historical urbanisation processes. Current neo-liberal redevelopment policies will not protect the urban poor from future earthquakes but this situation may change as the earthquake threat regains the attention of policy makers.

## Keywords

neighbourhood regeneration, earthquake resilience, Istanbul

## How to Cite

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## INTRODUCTION

The explosive growth of Istanbul from 1 million in 1950 to 10 million by the end of the century was dominated by illegal *gecekondu* (literally built overnight) development which accommodated the migrant labour needed to sustain state-led industrialisation in an emerging economy. But from the 1980s self-build squatting was largely displaced by rapidly developing, but weakly regulated, land and property markets - the emergence of Turkish neo-liberal urbanisation. Initially, this shift had two major impacts: the northerly extension of the CBD to Maslak and accelerated peripheral expansion, characterised by industrial decentralisation and low quality, high density apartment blocks with minimum public services.

But the loss of 18,000 lives in the 1999 Marmara earthquakes focussed attention on the legacy of 20th century urbanisation – hundreds of thousands of poorly constructed, earthquake vulnerable and life-threatening dwellings. In the aftermath, the concept of neighbourhood regeneration as earthquake mitigation entered the urban policy agenda, hitherto dominated by the problems of rapid urban expansion. However after sixteen years of policy debates, innovative projects and new legislation, neighbourhood redevelopment is widely perceived to be promoting gentrification, rather than providing the urban poor with safety from earthquakes and improved living conditions.

This paper aims to explain this sharp contrast between initial concepts and the emerging impacts by identifying the characteristics of post-war urbanisation shaping neighbourhood redevelopment, drawing on a literature review and an original case study of *Bağcılar*. The analysis focuses on the dynamic inter-relationship between academic and professional discourses, innovative neighbourhood projects and the evolving neo-liberal political and economic strategies of central government. The paper concludes that current practice will fail poor communities and outlines some of the policy changes needed to deliver socially just outcomes.

## THE CHALLENGING LEGACY OF 20TH CENTURY URBANIZATION

An understanding of the history of Turkish urbanisation is a fundamental requirement for an explanation of the contested concepts and practices of contemporary neighbourhood redevelopment. The physical legacy of illegal development is the official justification for the demolition and replacement of six million poor quality apartments in deteriorating low income neighbourhoods. The socio-economic legacy is at the root of the widespread grass roots opposition. Thus the paper first identifies the specific outcomes of 20<sup>th</sup> century urbanisation which structure neighbourhood redevelopment.

Until the mid-1980s, post-war state industrialization encouraged massive rural-urban migration to Istanbul. Migrants could not afford legally constructed houses and in a developing economy the state could not provide subsidised affordable housing. Therefore, the migrants met their housing needs in self-build *gecekondu* (literally 'built overnight') developments of single storey, low density dwellings (including gardens) on under-used land usually owned by the state – a 'moral economy' of housing<sup>1</sup>. In Istanbul, *gecekondu* development at scale within municipal boundaries started in *Zeytinburnu* and developed in a swathe around the pre-war city between 1950 and 1970 – see Figure 1. The state was either unable or unwilling to institute a formal capitalist property market. Instead it opted for populist clientelism which kept public lands out of the market<sup>2</sup>. Hence the state response to illegal land enclosure was a series of Amnesty Laws which provided both security from demolition and basic services in exchange for votes, accompanied by the imposition (but ineffectively enforced) of minimum construction standards<sup>3</sup>.

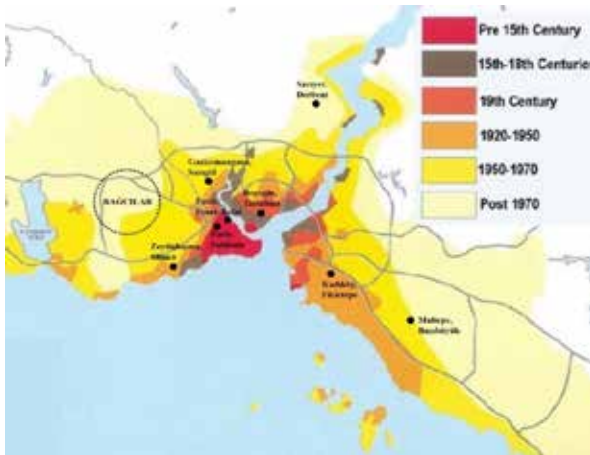


FIGURE 1 Metropolitan Growth of Istanbul

Peripheral public land outside municipal boundaries was enclosed by land brokers simply applying to the central government Title Deeds Offices. This enabled a huge number of mainly small plots to be formed, facilitating illegal construction. Until the 1970s individuals could wholly own such a newly created plot. But from the 1970s, as these areas were included within the boundaries of new municipalities, this process was outlawed. Brokers then turned to selling peripheral agricultural land using shared deeds: people could only purchase a percentage share of a plot, rather than a specific plot or identified part of a plot. Both types of landowners had no legal ownership of the dwellings they built on their legitimately owned land, since the construction was illegal. A high proportion of these dwellings were constructed on earthquake vulnerable land.

Housing development pressures intensified as the expanding industrial sector de-centralised through the (mainly illegal) construction of factories on cheap land close to the newly constructed motorways<sup>4</sup>. The 1965 Flat Ownership Law transformed *gecekondu* development by enabling the ownership of a single flat in an apartment block. This provided the security of tenure needed for the 'share of construction process'. Construction companies negotiated with the owners of single storey *gecekondu* dwellings to redevelop their land into 4-6 storey apartment blocks. The new apartments were shared between the owners and the developer<sup>5</sup>. This process also fuelled continuing illegal development of peripheral agricultural land through the consolidation of empty plots owned on the basis of shared land deeds. Thenceforth *gecekondus* were no longer built simply for shelter, but to create capital assets which could be traded as commodities. A major market in illegal dwellings emerged – an 'immoral economy of housing'<sup>6</sup>.

The 1983 Amnesty Law no. 2981 weakly regulated this rapidly expanding market by requiring Improvement Plans to be implemented in *gecekondu* areas<sup>7</sup>. *Gecekondu* residents had to apply to government licensed private technical offices for pre-title deeds which would be converted to title deeds after the municipality implemented the Improvement Plan for the area. But not all residents could afford to pay and make their applications correctly to obtain their pre-title deeds. Thus residents ended up with different levels of property rights ranging from title deeds, to pre-title deeds to no deeds at all – just pieces of paper giving no legal property rights<sup>8</sup>.

From the 1980s onwards, a significant exception to illegal development was the creation of the Mass Housing Administration (later referred to as TOKI) to provide central government support for housing co-operatives to build estates of apartment blocks. But most of these estates were also poorly constructed on earthquake vulnerable land.



1 Historic pre-20th century neighbourhoods- now occupied by the urban poor; high earthquake risk locations, which are increasingly vulnerable to gentrification.



2 Traditional 1950s geoköndü neighbourhoods - predominately built on publicly owned land, self-built, single storey, usually single family dwellings; now a residual category of poor neighbourhoods which are being redeveloped.



3 Redeveloped geoköndü areas - produced by the “share of construction” system since the late 1960s. These neighbourhoods are dominated by high density 4-6 storey apartment blocks, which have deteriorated over time, a high proportion of which are vulnerable to earthquake risk.



4 Illegal housing areas built on sub-divided peripheral land-until 1970s people can become the individual owner of newly created plots but have no ownership of the dwelling since it is illegally built. A high proportion of these neighbourhoods are vulnerable to earthquake risk.

FIGURE 2 A typology of earthquake vulnerable neighbourhoods

The resultant pattern of metropolitan expansion is illustrated in Figure 1. Three outcomes have major influences on neighbourhood redevelopment.

- The variety of earthquake vulnerable neighbourhoods means that the district mayors face different challenges and opportunities, as shown by the typology in Figure 2.
- The huge complexity of land and building ownership rights at the levels of both individual plots and building blocks (Figure 2), further fragmented by Turkish inheritance laws which require owners to divide their estate between all their children. Thus a land shareholder living in an apartment may be only one of many shareholders who live elsewhere.
- The variable attitudes and aspirations of low income residents, most of whom do not wish to see their community broken up, many of whom neither want nor can afford the replacement housing, and most live in neighbourhoods which have history of self-reliance and a capacity for collective action.



Whilst many 'owners' have only informal property rights which may not be accepted as legitimate, tenants have no property rights at all. Thus residents of poor 20th century neighbourhoods are both earthquake vulnerable and legally vulnerable. By definition, neighbourhood redevelopment requires the restructuring of this complex array of property rights which, along with residents' needs and aspirations, have to be identified and taken into account in the re-housing process. Hence securing the agreement of residents for a proposed demolition and re-housing project is extremely difficult. This was the challenging legacy facing policy makers when the 1999 earthquake tragically demonstrated the need for socially acceptable large-scale neighbourhood redevelopment programmes.

## NEIGHBOURHOOD REGENERATION IN ISTANBUL

Historically, in 20<sup>th</sup> century social democratic Europe, state-subsidised redevelopment and /or rehabilitation of run-down 19<sup>th</sup> century neighbourhoods generally improved the living conditions of existing low income residents<sup>9</sup>. This section demonstrates how, in the absence of a welfare state and in the context of the emergence of neo-liberal urban regeneration, the legacy of urbanisation is shaping socially regressive neighbourhood redevelopment. The analysis is structured with reference to three periods, distinguished by the changing relationship between academic and professional discourses, innovative neighbourhood projects and the evolving economic and political strategies of central government.

The concept of 'neighbourhood regeneration as earthquake mitigation' emerged in the aftermath of the earthquakes. Public outrage about the inability of much of the building stock to withstand earthquakes prompted an academic and professional discourse on earthquake mitigation, focussed on the need to address the causes of the huge scale of the loss of life - the legacy of thousands of poorly constructed earthquake vulnerable apartment blocks.

Turkey was emerging from a deep economic recession which had resulted in the election in 2002 of a single party, neo-liberal AK party government led by Prime Minister Erdoğan, after decades of weak coalitions and rampant inflation. Turkish scholars and policy makers increasingly engaged in the rapidly developing international discourse on the need for a holistic approach to urban resilience, which emphasises mainstreaming disaster risk management including risk sensitive urban redevelopment<sup>10</sup>. In parallel, the longstanding tradition of drawing on international urban planning experience re-emerged in the context of the EU harmonisation process. National government, supported by the World Bank, focussed on the need to implement earthquake resilient construction standards for new housing. The Istanbul Metropolitan Municipality (IBB), supported by the government, commissioned a variety of studies from national and international experts in earthquake science and urban planning, which focussed on the need to redevelop/rehabilitate much of the existing housing stock<sup>11</sup>.

The initial policy driver was a forecast that there was a high probability of a much more severe earthquake by 2030<sup>12</sup>. This prompted a major study by IBB with the Japanese International Co-operation Agency (JICA) which predicted that without major redevelopment some 185,000 buildings will be heavily or moderately damaged, causing some 90,000 deaths and 135,000 serious injuries. JICA argued that effective earthquake mitigation required the demolition or structural upgrading of more than a million dwellings in some 400 vulnerable Istanbul neighbourhoods<sup>13</sup>. IBB then commissioned studies and pilot projects<sup>14</sup> which drew on the experience of EU countries and advocated a strategy of comprehensive redevelopment/rehabilitation of high risk neighbourhoods using models which avoid gentrification. The Zeytinburnu Pilot Project proposed a model district-wide Emergency Action Plan which included widening roads into boulevards to ensure access of emergency vehicles in the aftermath of the next earthquake and designated open spaces as assembly points, together with the rehabilitation to earthquake resistant standards of schools and other public buildings<sup>15</sup>. The Fener-Balat EU project demonstrated the application of a community-based approach to neighbourhood rehabilitation derived from the

experience of EU countries<sup>16</sup>. Overall, this innovative work established the key components of a Turkish model of earthquake resilient regeneration of poor neighbourhoods with minimum gentrification.

However, as the economy moved from recovery to rapid growth with modest levels of inflation, political and economic elites fully established the goal of global city status<sup>17</sup>. In the context of a faltering EU harmonization progress and a second term for an increasingly neo-liberal, pro-development AKP government, this second period saw the emergence of the concept of 'neighbourhood regeneration as planned gentrification'. The concept of 'neighbourhood regeneration as earthquake mitigation' was marginalized as academic research informed by concepts of neo-liberal urbanism exposed the negative impacts of neighbourhood redevelopment and documented increasing grass-roots opposition<sup>18</sup>.

In 2005 some of the proposed powers of a draft Urban Regeneration Law were provided in Article 73 of Municipal Law no. 5399, including the designation of Urban Renewal Areas (URAs) and residential neighbourhoods to re-house displaced homeowners. TOKI was made the sole agency for the zoning and sale of state-owned land, with powers to expropriate property and to build and sell profitable housing to raise revenues for the construction of subsidised housing for sale. Thus from the mid-2000s neighbourhood redevelopment was characteristically implemented through a 'demolish/rebuild' partnership<sup>19</sup>. This was essentially a modified version of the share of construction process in which the municipality acquired the apartments and cleared the URA and TOKI then replaced the housing on site and in new neighbourhoods.

Few mayors used these powers being wary of the electoral risks of public opposition. However, Küçükçekmece District pioneered the redevelopment of two traditional gecekondu neighbourhoods Ayazma and Tepeüstü. With the support of local and international academics and in partnership with TOKI and IBB, the municipality sought to adapt international experience by combining comprehensive physical redevelopment with a 'social development programme' for the benefit of existing residents<sup>20</sup>. The stated intention of a partnership between the municipality, TOKI and IBB was to provide local rehousing. But the outcome was the long drawn out forced relocation of residents to a new TOKI estate, during which time some tenants refused to leave and lived in tents for up to three years. Local new housing was dominated by expensive gated developments catering for newcomers to the area. When the residents of the Başbüyük URA in Maltepe organised to resist expropriation and relocation they were met with a highly publicised, violent police response<sup>21</sup>.

But it was the controversial implementation of the 2005 Renewal Law No. 5366 in the city's historic districts which generate huge opposition. The law provided municipalities with powers to designate Renewal Areas (RAs) in already designated Conservation Areas. However, the Fatih Municipality, in partnership with TOKI, chose to use this legislation to implement the comprehensive redevelopment of the Sulukule neighbourhood in the Historic Peninsula. Despite well organised campaigning opposition, which generated massive local, national and even international publicity, redevelopment destroyed the 1000 year old Romany community. Most local residents were relocated to a TOKI estate some 40 km away. But the majority neither liked their new environment nor were able to keep up with the payments on the subsidised mortgages provided by TOKI. They moved back as tenants to streets close their now redeveloped neighbourhood. This gave rise to the slogan 'no Sulukule here'<sup>22</sup>. In Fener Balat the EU funded community-based pilot project was succeeded by a construction company-led rehabilitation project which is promoting neighbourhood gentrification<sup>23</sup>. In parallel, Beyoğlu Municipality commissioned a construction company-led combination of redevelopment and rehabilitation in the deteriorating 19<sup>th</sup> century Tarlabası neighbourhood adjacent to Taksim Square. Again, efforts by community activists failed to minimise gentrification<sup>24</sup>.



FIGURE 3 Designated URAs (red) and JICA maximum risk areas (orange)

The long awaited 2012 'Law of Transformation of Areas under the Disaster Risks no. 6306 (conventionally referred to as the Urban Regeneration Law) defined the onset of the third period. The new Ministry of Environment and Urbanism (MEU) took control of the URA programme through its powers to designate both URAs and re-location areas, in response to applications from municipalities. Municipalities identify potential URAs, and undertake all technical and planning analyses, including earthquake vulnerability surveys before application for URA designation. Neighbourhood residents do not participate at this stage. After designation, the municipality prepares formal implementation plans as the framework within which construction companies develop housing redevelopment projects with residents.

Implementation relies on the share of construction process and is invariably contentious. Individual residents, often with ambiguous property rights, negotiate with a construction company to agree their share of construction (according to the level of their property rights) and the construction company share which determines its rate of profit. But compensation for 'illegal' dwellings is still only about quarter of their market value and this means that the balance required for purchase – a subsidised mortgage - is unaffordable for many residents<sup>25</sup>. However, new financial incentives do provide support for residents who have 'legitimate' property rights, including the reduction of VAT on construction from 18% to 1% and rent support to owners to pay for temporary re-housing during redevelopment. But tenants still have no re-housing rights and receive only temporary rent support with a contribution to moving expenses.

The official aim of national policy is to give priority to improvement, clearance and renewal of disaster (mainly earthquake) vulnerable areas and buildings to deliver a national target of the demolition of 6 million poor quality and earthquake vulnerable dwellings across Turkey<sup>26</sup>. In Istanbul 40 URAs have been designated, including pre-2012 URAs now re-designated to enable the new powers and resources to be applied. But the URA designation criteria are not transparent and very few of the first wave of URAs designated since 2012 are in the high earthquake risk areas identified by the JICA study – see Figure 3. This fundamental contradiction between officially stated aims and emerging outcomes is at the core of the contemporary policy and political debates. Many critics argue that this can only be understood in terms government economic growth policy giving priority to sustaining construction industry. Thus URAs are creating opportunities for profitable housing development as they are designated in poor neighbourhoods where physical upgrading will deliver the highest rate of return to construction companies<sup>27</sup>.

## EMERGING REGENERATION IN BAĞCILAR

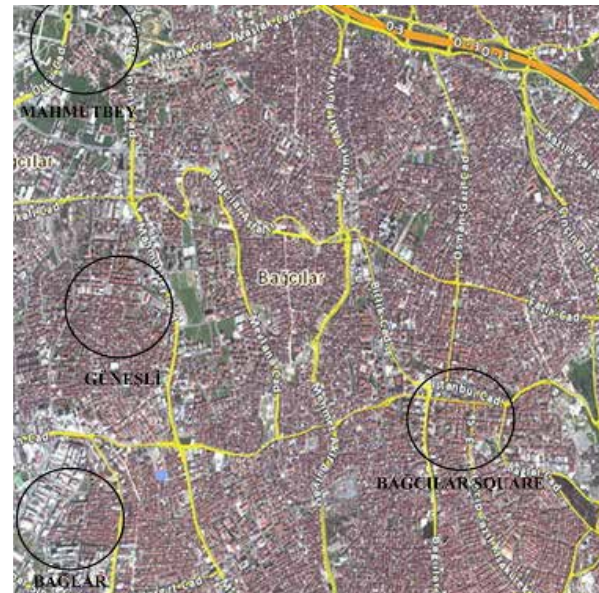
Bağcılar was a village in open countryside until the 1970s when land brokers began selling shared title deeds for small plots of peripheral agricultural land. From the 1980s the area developed increasingly rapidly and almost wholly illegally, with the exception of a significant number of co-operative housing estates, and was constituted as a separate Municipality in 1992. Rapid urbanisation intensified through the 1990s and the population was estimated at 746,650 in 2010. The 2002 JICA-IBB study estimated that 90% of the resultant building stock is made up of earthquake vulnerable concrete frame structures<sup>28</sup>. This stock is dominated by 6-8 storey apartment blocks in primarily residential areas, often with small scale commercial and industrial users on the ground floor – figure. JICA identified Bağcılar as one of the 11 most earthquake vulnerable districts in Istanbul. It estimated that 7000 buildings, 20% of the district total, would suffer heavy or moderate damage, causing over 5000 deaths with more than 7000 severely injured. The study recommended strategic improvement or redevelopment in all 22 neighbourhoods.

In 2008 the municipality prepared the Bağcılar Spatial Development Strategy which focussed on earthquake resilience by building on the experience of the 2005-6 Zeytinburnu Project to define a District wide Emergency Action Plan and prioritised strategic neighbourhood redevelopment areas<sup>29</sup>. But the failure of central government to enact urban regeneration legislation discouraged intervention in gecekondu neighbourhoods. Instead the municipality gave priority to applying the share of construction process to the redevelopment of poor quality, earthquake vulnerable co-operative housing estates of apartment blocks of 4 to 10-11 storeys. Their long established, self-management arrangements make it easier to involve residents collectively in redevelopment. Hence in 2012 the municipality commissioned consultants to deliver a prototype model of project development in Barınkent which, in sharp contrast to conventional practice, involved designers working residents from the outset- see Figure 5. But notwithstanding unprecedented levels of collaborative work involvement, the residents were persuaded by a construction company to choose a cheaper design and reconstruction is now underway, demonstrating the inherent limitations of the share of construction process.

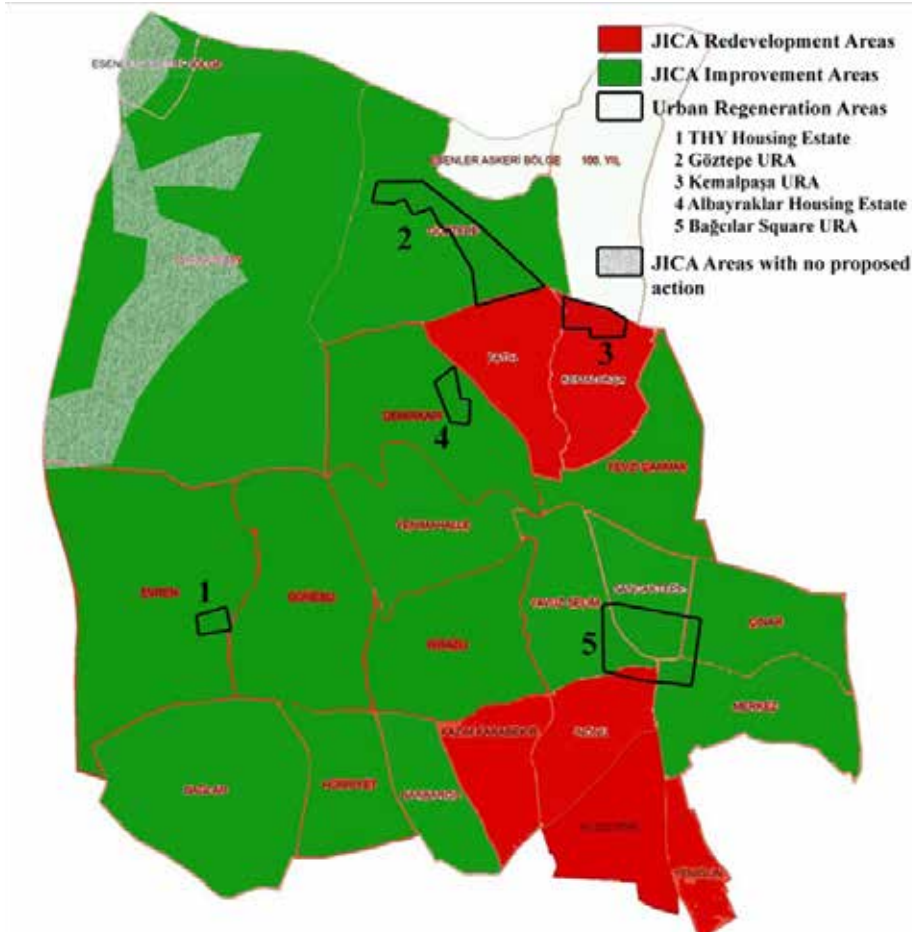
In the context of the 2012 Urban Regeneration Law the municipality established an Urban Design Department (UDD) which was given the powers and responsibilities of the three main municipal departments in URAs: Planning, Development and Urbanism, Licencing and Audit<sup>30</sup>. It introduced significant improvements to communications with the public, including giving residents more direct access to municipal staff via shop front style offices. A multi-disciplinary team of architects, urban planners and civil engineers, secured the designation of 5 URAs: the Albayraklar and THY Housing Estates and three neighbourhoods with potentially high property values - the semi-commercial Bağcılar Square area and the low rise, low density Göztepe and Kemalpaşa gecekondu neighbourhoods, which include public land purchased with a grant from the World Bank. UDD surveys confirmed the extreme earthquake vulnerability of Albayraklar and THY estates but none of the other URAs are in the highest risk areas defined by the JICA research – see Figure 4. Implementation began with the Albayraklar URA. A design project prepared by KİPTAŞ which gave each resident an apartment was rejected by the residents because they would need a 50,000 TL mortgage. The municipality arms-length company BAŞAK prepared an alternative design which reduced the costs to the residents to 40,000TL and the contractor's profit to 13%. But this was only possible by increasing the density from 716 new apartments to 1196: 480 for the contractors' share of construction<sup>31</sup>. Nonetheless the sometimes heated negotiations with the residents over the terms of this 'deal' are still ongoing.



1 Bağcılar Aerial View-1970



2 Bağcılar Aerial View-2014



3 Jica areas and urban regeneration areas in Bağcılar

FIGURE 4 Urban growth and high risk neighbourhoods in Bağcılar

The municipality is making some significant progress within the limitations of a private sector-led national policy which restricts implementation to variations on the 'share of construction'. It has developed its capacity for neighbourhood redevelopment through a major reorganisation of technical staff, improved communication with the public, innovations in project design and by creating a funding model which reduces the profitability of construction firms whilst sustaining commercial viability - all of which constitutes a major break with the long established traditions of Turkish bureaucracies unheard of five years ago. There is a real prospect of some success in the first five URAs, but it is clear that the Municipality does not have the tools to intervene successfully in the highest risk, poor neighbourhoods identified by the JICA study.

## HISTORY AND PROSPECTS

The challenges of neighbourhood redevelopment in are rooted in Turkey-specific 20<sup>th</sup> century urbanisation processes and outcomes. An informal development process, dominated by self-build *gecekondu* and 'share of construction' housing production, created vast tracts of poor and deteriorating neighbourhoods and a legacy of ambiguous property rights. By definition, neighbourhood redevelopment requires the re-structuring of these property rights. In a policy environment dominated by increasingly neo-liberal economics and politics, the implementation of a policy of redeveloping poor and earthquake vulnerable neighbourhoods in the interest of their inhabitants is subordinate to economic policies which sustain growth by vigorously supporting the construction industry. Thus the state enables and supports the primacy of market-led, profitable neighbourhood redevelopment, which is reliant on a modernised version of the share of construction process, now operating in a formalised housing market. The state subsidises housing construction costs by minimising VAT and provides subsidised mortgages to people with 'legitimate' property rights to enable them legally purchase a modern apartment, albeit at the expense of urban environment quality. But the level of profit generally required by private construction companies means that house prices are still unaffordable for households with low and irregular incomes and tenants have no re-housing rights.

Thus the evidence of recent academic research is that neo-liberal redevelopment is delivering a Turkish version of the global phenomenon of planned gentrification, which fails to improve and often worsens the housing conditions of the poor. But the current debate does not address the fact that failure to deliver clearance by consent will guarantee catastrophic loss of life in the next earthquake - maybe within 15 years. However, the dormant concept of neighbourhood regeneration as earthquake mitigation may soon re-emerge. A major IBB project demonstrates that JICA-IBB significantly underestimated of building damage and deaths and identifies more precisely the location of high risk buildings<sup>32</sup>. The challenge for planning academics and professionals is to go beyond criticism to develop sound alternatives that could deliver neighbourhood redevelopment which minimises gentrification. This would build on the research and innovative studies which emerged in the aftermath of the 1999 earthquake and the positive achievements of innovative municipalities such as *Bağcılar*. Such models would accept the evidence of the historical experience of countries such as England<sup>33</sup> and the Netherlands<sup>34</sup> and start from the premise that the availability of affordable replacement housing for all residents, including tenants, delivered through neighbourhood scale participatory processes, is necessary to achieve clearance by consent. The new assessment of earthquake risk will both emphasise the political risks of continued failure to target vulnerable areas provide the data needed for effective targeting. The need for neighbourhood redevelopment is the legacy of a moral economy of informal housing production and distribution which produced earthquake vulnerable neighbourhoods. There is now a moral imperative to modify the neo-liberal parameters of policy and apply a wider range of policy instruments to mitigate the impact of the next major earthquake with minimum gentrification.



1 Barinkent Housing Estate: Apartment blocks before

Note: The authors were members of the consultants team and it was this experience that initiated the ongoing monitoring and evaluation of neighbourhood redevelopment in Bağcılar.

The first stage of the design process was to engage fully with the residents through a face to face questionnaire survey of property owners to establish their needs and priorities, and regular meetings between the consultants, the municipality's urban regeneration department and the residents to explain the redevelopment process. The second stage was the development of two detailed design alternatives which were shared with the residents at an evening meeting at the Municipal Hall attended by the Mayor and Deputy Mayor. At the end of the meeting, another short questionnaire was given to the residents asking for their views on the alternatives. The municipality subsequently published the design alternatives as a booklet. The survey results were used to revise the selected alternative and produce the final version of the desing proposal which was submitted to the municipality. The Municipality's preferred design has 146 flats for residents and 51 flats for the contractor in 3 low-rise and 1 high rise blocks. Residents will have to pay 35.000 TL. The private contractors' design chosen by the residents has a total of 232 flats in 4 high rise blocks-146 flats for residents and 86 flats for the contractor. Residents will have to pay 26.000 TL.



2 View of Municipality's preferred scheme



3 View of residents' preferred (contractor's) scheme



4 Apartment blocks before



5 View of Municipality's preferred scheme

FIGURE 5 Neighbourhood redevelopment in Bağcılar

## Disclosure Statement

No potential conflict of interest was reported by the author.

## Notes on contributors

Mike Gibson has over 40 years of experience of university teaching, management and research, private sector consultancy and local government planning practice. Since 2001, as Emeritus Professor of Urban Planning and independent researcher and consultant, he has divided his time between the UK and Turkey.

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Figure 2:

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Figure 5:

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# GORAKHPUR: A CASE STUDY OF RESILIENCY

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India with its immense geographic diversity faces multidimensional risks to climate change. Increased flooding, heavy storms and extreme weather events are affecting people's everyday life significantly. Statistics related to its devastating effects show how weak infrastructure and services magnify the impacts of extreme events for modern cities. Henceforth, Government of India, while envisioning '100 New Smart Cities' or 'Rejuvenation of 500 old cities' (AMRUT, 2015), does resiliency get priority? This research paper will try to investigate the nature of resiliency we should envisage through the case of Gorakhpur (one of the three pilot cities in India to have developed their resilience strategies under the ACCCRN network), because of country's rapid physical as well as climatic transformation, in order to assure safety & sustenance first for its people. The research enquiry will also showcase country's successful historical example (Varanasi, 3000 years old city located in Uttar Pradesh) of 'Flood Resiliency'. A comparable context of both traditional & contemporary cities will capture a holistic scenario of Indian planning history in terms of acknowledging 'Resiliency' as a part of core city planning principles. Critical understanding of that transforming process will help to find out how contemporary inclusive resilient planning strategies can be framed for modern India.

## Keywords

Multidimensional risks, Nature of Resiliency, Safety & Sustenance, Flood Resiliency, Indian planning history, Inclusive

## How to Cite

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## “URBANISM” IN INDIA

‘Imagine a world where we live within the limits of our environmental resources, where poverty is no longer an issue, where everyone has access to clean water, sanitation, sufficient food, decent shelter, and education – a world where everyone has a chance to prosper. Cities are often cited as the key to such a future, but only if we can create cities that are sustainable and resilient.’ (Visions of a Resilient City by ARUP)

So, how do we define ‘Urban Resilience’? It is “the ability of cities to tolerate alteration before reorganizing around a new set of structures and processes” (Alberti et al., 2003)

India with its immense geographic diversity faces multidimensional risks to climate change almost every year. Being the second most populous country with over 1.2 billion people<sup>1</sup>, the humungous pressure of urbanization has been forcing people to grapple with issues like infrastructure deficits, ineffective urban planning and inadequate basic service provisions for a long time. As a consequence, every year cities are facing heavy loss of life and property due to climate-induced calamities<sup>2</sup>.

Urban centres in India are the new engines of economic growth and to assure their prosperous future, urban planners, policy makers, politicians along with ‘aam aadmi’<sup>3</sup> (common people) should be made concerned about their sustenance first. ‘Resilient cities in the light of climate change should be able to develop plans for future development and growth, bearing in mind the climate impacts that the urban systems are likely to face.’ (Prasad et al., 2009)

## NEED FOR BEING “RESILIENT”

‘Within Asia, 24 percent of deaths due to disasters occur in India, on account of its size, population and vulnerability. Floods and high winds account for 60 percent of all disasters in India.’ (Tenth Five-Year Plan (2002-07) According to ‘India Today’ (September, 2015), the country has a strong history of getting affected by floods starting from ‘Bihar floods’ in 1987, ‘Maharashtra floods’ in 2005, ‘Assam floods’ in 2012, ‘Uttarakhand floods’ in 2013, ‘Jammu & Kashmir flash floods’ in 2014 & recently ‘Chennai flood’ in 2015. Out of total geographical area of 329 mha., more than 40 mha is flood prone. (Vulnerability atlas of India, BMTPC) According to the Census 2011 Report, 53 Indian cities have a population of more than a million and 25 of these are in the coastal states. Among the world’s top 10 in terms of population exposed to coastal flood hazard, two Indian cities, Mumbai and Kolkata, feature in the list. Statistics related to devastating flood-effects show how weak infrastructure and services magnify the impacts of extreme events for modern cities. According to NDMA<sup>4</sup>, the average annual flood damage during 1996-2005 was Rs.4745 crore, as compared to Rs.1805 crore, the corresponding average for last 53 years. (2008)



FIGURE 1 Flood in Indian Cities, 2015, People wade through flood waters in rain-hit Chennai

Urban development perspectives are expanding for India. According to TERI<sup>5</sup>, 31% of the current population in India resides in urban areas where as, by 2050, a billion people in India will live in cities.<sup>6</sup> Henceforth, Government of India, while envisioning ‘100 New Smart Cities’ (2015) or ‘Rejuvenation of 500 old cities’ (AMRUT, 2015), does ‘resilience’ get priority? The present urban development policies generally do not consider/acknowledge the impact of climate change. According to TERI, around 70% of infrastructure<sup>7</sup> in India is yet to be developed which is a huge opportunity for integrating climate resilience in future infrastructure development.

So, this research paper will try to investigate the nature of resiliency we should envisage through the case of Gorakhpur (a city located in Uttar Pradesh), because of country’s rapid physical as well as climatic transformation, in order to assure safety & sustenance first for its people. Inclusion of another comparable historical context (Varanasi) will help to capture a holistic scenario of Indian city-planning history in terms of acknowledging ‘Resiliency’ as a part of core city planning principles. Critical understanding of that transforming process will help to find out how contemporary **inclusive** resilient planning strategies can be framed for modern India.

## PROCESS OF “RESILIENCE” TO “NEGLIGENCE”

Traditional cities were not planned. But they had the capacity to respond to its context more sensitively, which actually ensured their successful existence over the years. But, post-independence, the shift in contemporary planning process has helped enough to promote non-inclusive urban development across cities. As a consequence pre-dominantly urbanization process is struggling with communities in most vulnerable condition. So, they become prime victims of climate related calamities.

As far the population growth is concerned, ‘Varanasi’ & ‘Gorakhpur’ are considered as two largest cities of Eastern Uttar Pradesh of India.<sup>8</sup> (GEAG<sup>9</sup>, 2013) A brief introduction to their historical context along with process of transformation will be able to capture the process of ‘Decay’ for ‘Urban Resilience’ in India.



FIGURE 2 Communities with vulnerable condition, Gorakhpur City, 2013

## HISTORICAL “EXISTENCE”: A CASE EXAMPLE OF VARANASI

Situated on the left (west) bank of the river Ganges in the Indian state of Uttar Pradesh, Varanasi has long been considered as one of the oldest surviving urban centres of Indian and world civilization (approximately 3000 years old). Irrespective of its historical religious importance, the city is famous for its majestic ghats along western bank of river.

‘Ghat’ is simply a set of wide steps leading down to the river which have become natural space of congregation, religious ceremony, and recreation. The steps function as a physical traversing device. But, this strategic interface of land and water were not built only to serve social/religious activities for people. A strong contextual understanding related to ‘topographical setting’ had encouraged to develop such physical ‘resilient’ strategies for traditional Indian cities.

Along the river Ganges a high ridge of kankar can be seen, extending almost continuously from one end of the city to the other interrupted only at ‘Dasaswamedha ghat’ by the ‘Godaulia nala’. This high ridge acts as a solid natural barrier protecting the city from the river. This limestone kankar naturally slopes down at the godaulia nala, acting as a natural drainage path for the city<sup>10</sup>. But, due to settlement’s existence along the ‘erosion edge’ of river, it was mandatory to encourage extra pre-cautions by stabilizing the crucial ‘land-water’ interface through physical development. As a response, strategic placement of high retaining dry-stone walls along with ghats acted as a structural protection for steep eroding banks.

Also the steps of the ghats allow the water from the Ganges to rise and as the seasons change and the water level goes down, the steps once covered by water slowly gets revealed. This designed historical interface actually acted as a protective buffer which helped habitation to respond towards natural forces (high tide and low tide) in a more adaptive/flexible way. In continuation to that, organically evolved city structure encouraged termination of all streets near these ‘ghats’, which eventually facilitated city’s natural drainage system with reference to existing topographical nature.

This explains very clearly, how historically cities have ensured their existence by adapting thoughtful contextual ‘flood resilient’ strategies where as contemporary example showcases a situation in contrast.

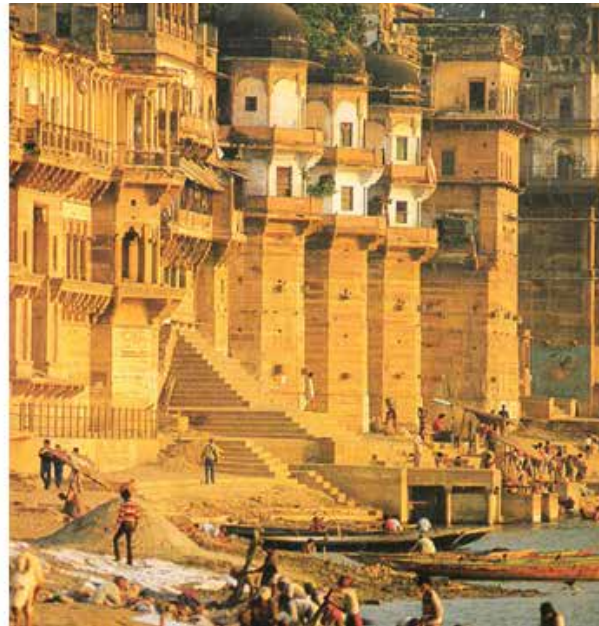


FIGURE 3 Traditional 'Resilient' interface of land & water at Varansi

## CONTEMPORARY "DECAY": A CASE EXAMPLE OF GORAKHPUR

Gorakhpur is located in the Terai belt of Eastern Uttar Pradesh, India. It is comprised of the districts of Basti, Deoria, Azamgarh and parts of Nepal Tarai. Historically, it had been an important centre of Aryan culture and civilization.

Due to its pleasant climate, British people developed it as mini hill station. The seed of urbanization was implanted with establishment of Northern Railway headquarters during 1970, which got transformed later into the largest commercial centre of the region having both retail and wholesale market ranging from agro-based products to home-based cottage industries.

During the last three decades, the population of the city has increased rapidly with a record of 64.1% growth during 1981-1991<sup>11</sup>, which is a result of incorporation of 47 villages into the municipal area. The city has exerted tremendous pressure on its infrastructural capacity due to rapid influx of population from nearby rural areas. Hence, in present situation there are 110 slums accommodating approximately 33% of total population. (ibid: pg 13) The constant deterioration of living conditions has been affecting citizen for a long time.<sup>12</sup>

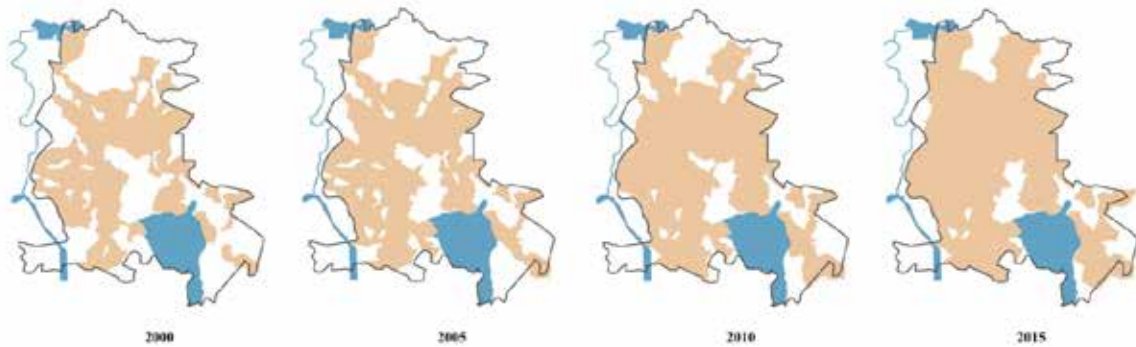


FIGURE 4 Gorakhpur growth pattern from 2000-2015

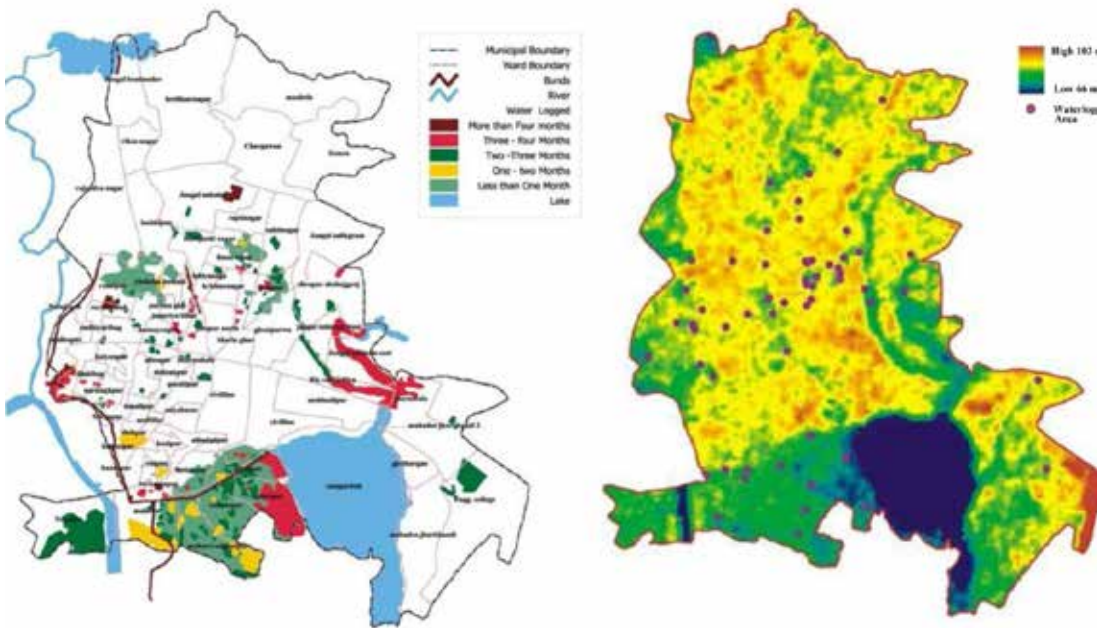


FIGURE 5 Gorakhpur City: Water-logging scenario

The city is naturally vulnerable due to its physical attributes. Due to the frequent meandering of the river Rapti in the past, the saucer shape topography of the city is badly affected. Some parts of south and south-east of the city go lower than the riverbank during monsoon season. Presently, 18 percent of city area especially the southern, western and central areas face acute water logging.

Nearly 70% of Gorakhpur's people are rural who sustain on Agriculture. These people are struggling with these climate related vulnerabilities years after years. But, the emerging context of pre-disaster, disaster and post-disaster periods is testing their toughness beyond their nerves. There are areas where water stagnates for more than three to four months, leading to adverse health conditions and increasing health hazards. After independence, lack of comprehensive planning approach, negligence towards ecological understanding has gifted city with enough haphazard non-resilient development leading towards extreme vulnerabilities. As a consequence, along with water logging, the city is also suffering from poor sanitation and solid waste management causing the unhygienic environment susceptible to water borne and vector borne diseases also.





FIGURE 6 Flood in Gorakhpur, 2009



FIGURE 7 Shared Learning Dialogues, Gorakhpur, 2013

Eventually, these are some crucial problems which most of contemporary Indian cities have been facing due to its constant negligence towards resilience. But, Gorakhpur district is already trading on this new path to create a safe and resilient future for its people. The Asian Cities Climate Change Resilience Network (ACCCRN), supported by the Rockefeller Foundation was launched in 2009 to create climate resilience strategies and action models in 10 cities across four countries in Asia. Gorakhpur was one of the three pilot cities in India to have developed their resilience strategies under the ACCCRN network. Multiple stakeholders joined hands with the city governments to develop resiliency strategies and identified pilot adoption projects for implementation.

## “RESPONSE” TOWARDS “RESILIENCE”

Gorakhpur’s flood response-centric disaster management plan was failing to meet the crisis of erratic weather patterns. So, a dynamic group of institutions (GEAG, NIDM, ISET) joined hands with Gorakhpur Disaster Management Authority to demonstrate a fresh approach that integrated climate concerns into disaster management planning. ACCCRN developed a common ‘methodology’<sup>13</sup> based on critical sectoral ‘assessment’, which ultimately helped to take necessary ‘Resilient Actions’.

## “RESILIENT” METHODOLOGY

Shared learning dialogues were envisaged as a key step to engage a diverse group of people varying from scientific experts, local government officials, research centres, to civil society, private sector and community representatives through a process of knowledge sharing for identifying key priorities, needs and gaps in the cities. They have been designed to ‘facilitate mutual learning and joint problem-solving within a project city to understand the linkages between urban growth and development and climate change and vulnerability of people and sectors’ by incorporating open communication between various stakeholder groups. (ACCCRN, 2013).

In continuation to that, ‘Climate vulnerability assessments’ and detailed ‘Sector Studies’ on water, transport, sewage/drainage etc., provided a basis for all project cities to facilitate better understanding on how individuals, communities, and urban systems specific to their contextual background may get affected directly and indirectly by future climate impacts. Implementing partners along with local universities were involved to facilitate this study. As an outcome, ‘City Resilience Planning & Strategies’<sup>14</sup> were formed which draws analytical conclusions from all previous stages and envisions city’s climate resilience in question through specific strategies.



FIGURE 8 Methodology and Tools used for the vulnerability assessment in Gorakhpur, 2013

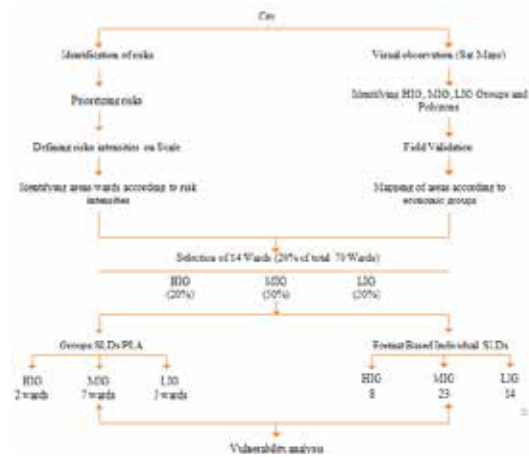


FIGURE 9 Gorakhpur Resilience Strategy Framework, 2013

## “RISK” ASSESSMENT

A detailed assessment on various factors were done before preparing final ‘Risk Framework’. Pre-dominantly ‘Vulnerability’, ‘Urban Scenario’ and ‘Climate’ sectors were prioritized during this stage;<sup>15</sup> Basic infrastructural services (e.g. roads, housing, drinking water, waste management, electricity, transportation and telecommunication) essentially ensure resilience of a community. Based on increasing risk of water logging in Gorakhpur, particularly for the unprivileged people, a study on ‘vulnerability’ has been done by GEAG based on the analysis of primary data collected through community and household questionnaires, participatory methodology tools and shared learning dialogues.

Development of city infrastructure is also not at par with the increasing demand due to uncontrolled influx of population growth. To address this severe issue, several SLDs were organized during ‘Urban Scenario assessment’ to include key stakeholders (e.g. personnel from the IMD, the Municipal Corporation of Gorakhpur, the Fisheries Department, Gorakhpur Development Authority, informed citizens and academics of the city) to find out key drivers of urban growth in future which were ultimately categorized into political, economic, social, technological, legal and environmental factors.

The city has become a witness of transforming weather events for last few years. Recalling the devastating flood scenarios of 2008 (high flood year in the recent past) through interviews of key stakeholders from various wards made it mandatory to conduct a detailed study on ‘climate change projection’ for Gorakhpur which showcased a substantial uncertainty with the time series of precipitation values. ‘It was seen that the minimum monthly totals, especially in the monsoon months, show an increase over corresponding values in the past, while the maximum monthly totals show a decrease.’(GEAG, 2013) Concerned authority relied more on the trends and changes in future precipitation patterns. The implications of such changes were discussed in an SLD focused on developing climate scenarios. The participants included personnel from the Indian Meteorological Department (IMD), the Irrigation Department of Uttar Pradesh, members from the ISET18 and the GEAG Team. From the discussions, it was deduced that the focus needs to be on addressing challenges associated with increased “wetness” during the monsoon months that could cause increased flooding.



FIGURE 10 Gorakhpur City : Simulated future maximum temperatures (2046-65)<sup>16</sup>

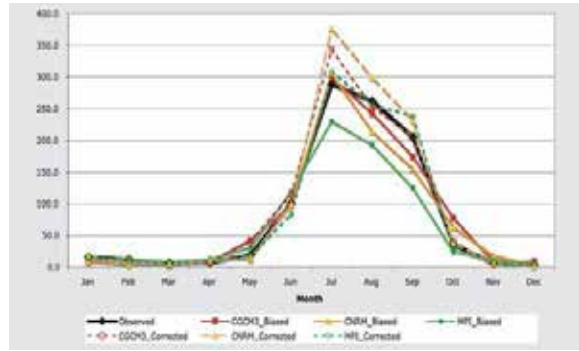


FIGURE 11 Gorakhpur City : Future rainfall scenario (2046-65)<sup>17</sup>

DEPARTMENT	GAPS IDENTIFIED	RECOMMENDATIONS TO DEPARTMENTS
<b>Rural Development Distt. Administration</b>	<ul style="list-style-type: none"> <li>• Lack of adequate human resources</li> <li>• Lack of information on fund disbursement to the beneficiaries under the disaster relief fund</li> <li>• Non-utilisation of funds due to lack of information on disaster management relief fund</li> </ul>	<ul style="list-style-type: none"> <li>• Development programmes should be designed keeping in mind the local disaster threats and disaster reduction should be an integral part of the development programmes.</li> <li>• Coordination between governmental planning and development projects should be established.</li> <li>• MGNREGA scheme should be utilised for cleaning of rivers and removal of silt. Several other developmental works can be done through MGNREGA funds.</li> </ul>
<b>Health Department</b>	<ul style="list-style-type: none"> <li>• Connecting road to PHCs/CHCs gets damaged during rainy season. Long duration power cuts creates problems in attending the patients in the PHCs/CHCs.</li> <li>• Women employees feel unsafe working in the late evening hours in the centres because there is no adequate arrangement of lights on the roads.</li> <li>• Caution before floods are not given due to which adequate preparation are not made.</li> <li>• Most of the health centres get waterlogged due to heavy rain.</li> </ul>	<ul style="list-style-type: none"> <li>• In the construction of PHCs/CHCs, it is important to include flood resistant techniques along with earthquake resistant techniques.</li> <li>• Training on DO's and DON'T's at times of disaster should be organised for the members of Village Health and Sanitation Committee.</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• School premises is often used for shelter and relief centres during flood disaster.</li> <li>• Lack of knowledge in students regarding basic disaster preparedness and safety.</li> <li>• Many of the schools are not located at elevated land.</li> </ul>	<ul style="list-style-type: none"> <li>• In the construction of schools, it is important to include flood-resistant techniques along with earthquake-resistant techniques.</li> <li>• Site selection for construction of schools should be done at a safe and elevated place.</li> <li>• Mock programmes in the schools should be organised on relief and management of disasters; the schools should not be used as disaster relief camps or for storage of food grains. This adversely affects education.</li> </ul>

TABLE 1 Example of Department-wise identified gaps and recommendations

SLD also gave priorities to ‘another key consequence of increased wetness and increase in temperature was an increase in humidity in the monsoon months, which is likely to pose additional challenges to the health sector’ (GEAG, 2013).

While governments are still grasping reality of climate change, voluntary organizations on the ground have already started their job by raising awareness and building resilience. Sometimes, it is just a sms that can be a saviour like weekly forecast delivered to the local farmers by GEAG. Being at the forefront, local communities are the first responders to disasters. Under the grant of 13th Finance Commission, the Uttar Pradesh State Government is giving skills and resources to nearly 9000 vulnerable gram panchayats so that they can better prepare for disasters. The priority has been given to make community aware of certain disaster mitigation practices or response practices or relief practices through running different skill building programs in those vulnerable areas and the initial focus group is women. According to Aditi Umrao from Uttar Pradesh State Disaster Management Authority <sup>18</sup>, ‘in our community based program, we are involving more and more women only because they gave cascading effect to training programs or to the learning which they are given.’

## “RESILIENT” ACTION

The city has been suffering from ‘Waterlogging’, ‘Sewage & Sanitation’, and ‘solid waste’ pre-dominantly for a long time. An unique response-centric approach ultimately motivated both government and community to take up required ‘Resilient’ actions more efficiently.

## NEW ROLE FOR GOVERNMENT

‘Shared learning dialogues is a process that brings together our technical knowledge on climate change and people’s wisdom be it frontline functionaries, district departments or even ordinary citizens. The solution that emerge from this convergence are effective and sustainable.’ - Shiraz Wajih, GEAG (Gorakhpur Environmental Action Group)

Each department of the district (Rural Development, Health, Education, Agriculture, Animal Husbandry, Jal Nigam, Panchayati Raj, Flood & Draining, Saryu Canal) that deals with disaster management came together to analyze city’s vulnerability under different climatic conditions. Guided by climate experts and local knowledge, they identified existing gaps in their planning process and came up with key areas of improvement. These revised departmental plans then converted into a forward looking ‘District Disaster Management Plan’ complete with a wide range of recommendations that would build the expected resilience.



FIGURE 12 Gorakhpur City : Citizens' march for a better tomorrow



FIGURE 13 Skill building programs for women in Gorakhpur



FIGURE 14 New climate responsive farmlands in Gorakhpur

## ROLE OF COMMUNITY

Farmers have started reclaiming their autonomy over seeds. They run a seed bank that sells traditional and climate resilient seeds to fellow farmers. According to Ram Nivas, Chikni (farmer of Gorakhpur) ‘If we grow robust crops, then no matter whatever disaster strikes, be it heavy rain or draught, it will survive. Like the millets which were grown 50 years back. They will give food security even if the rest of the crops are lost in disaster’. Small and marginal farmers have also adopted new techniques of farming and found themselves better prepared for erratic weather events. ‘This has cow and buffalo dung, and some garbage. We have sealed it and left it to decay outside. Once it decays, it will turn into compost manure and can be used in the farm.’ - Meghraj, farmer of Panchgawn, Gorakhpur

Communities have also started adopting local strategies to make their habitation more safe and stable. Residents affected with flooding and stagnant water in their homes started encouraging new designs with a raised foundation (termed ‘corbelling’), which allows for excess water to flow beneath the structure. As, families may choose to stay with their homes during floods, developers added concrete shelves just below the ceiling so that valuables and food could be safely stored during high waters. Local knowledge has also introduced local material into resilient design and construction. (e.g. terra cotta roofing, bamboo etc.)



FIGURE 15 Construction of new homes designed with community inputs in Gorakhpur

## RESILIENT “LEARNING”

Indian cities have been going through rapid urbanization through last few decades. But, development only becomes successful when their future has been secured. This paper has documented how ‘resiliency’ has been addressed diversely in different time-zones of ‘Indian planning history’. Historically, both cities (Varanasi & Gorakhpur) utilized their proximity to existing natural resource (river) as an asset for initiation of development. Case example of Varanasi further showcases how people have prioritized their safety by taking contextual precautions while building their habitation by optimizing future risk-factor. Whereas, case example of Gorakhpur showcases how planning policies have only encouraged ‘development’ after post-independence by neglecting its ‘context’. As a consequence, the failure of ‘demand-based approach’ have put future of city under risk. The change of climate has made its sustenance more vulnerable. So, can this situation be improved?

According to Prof. Anil Gupta from National Institute of Disaster Management, ‘We should focus on the underlying causes of risk- those factors that increase risk. When risk increases, then the form of disaster is bigger, the losses are more. We should address these risks through our development plans and these should link with our district disaster management plan. We should not wait for disaster to take action.’ Example of Gorakhpur city also showcases a successful case-study of a community in India that seeks to strengthen its institutions to address major challenges from nature and climate.

Developing resilience in the system and amongst people is a slow long term process. Henceforth, the evolving strategies which were framed for Gorakhpur city (as an outcome of ‘response-centric’ inter-disciplinary approach conducted by GEAG, NIDM, ISET along with ACCCRN network) will focus first on problems that are closely related to climate change and have a higher concern for the residents and city-managers. Later, those strategies will emphasize the development of capacity to address the technical, institutional, social, cultural and other dimensions. ‘To create a ripple effect that builds resilience over time in multiple arenas, the strategy will utilize targeted interventions that build knowledge, provide demonstrated examples, assist the development and build the capacity of organizations and creates pressure for change at behavioural, institutional and political levels.’<sup>19</sup> To do so, the proposed resilient framework should have following foundations;

i) *Motivation & Drive*- At present, building urban climate resilience does not get encouraged by any policy at the national or state level which poses a challenge for the cities to initiate a process on their own. In the ACCCRN cities, the financial assistance from the Rockefeller Foundation and the technical assistance from the ACCCRN partners facilitated or ensured the city's initial buy-in. So, motivational strategies should be taken care of.

ii) *Participatory Component*- The government of India has introduced the Community Participation Law (CPL) and made it mandatory as a reform under the JNNURM scheme. However, in reality, the culture of community participation is not popular here. So, to bring awareness, targeted physical and institutional actions has to be demonstrated directly which can address current and climate related problems at the local (ward) level while also building the social and institutional capacity to take action at that level. Resilience building strategies have showcased how response-centric participatory methodology can ensure sustainable future. Interdepartmental coordination is a mandatory for any climate resilience exercise. The resilience strategies are beyond administrative limits because of their inherent connection to geography, resources and their conservation, protection and management.

iii) *Capacity building & Institutionalisation* - The resilience-building process at the city level should be institutionalized through formation of a separate cell in the municipal corporation. The scope of pursuing the task would actually go beyond local urban bodies as we know, climate resilience have implications on various sectors like urban development, resource management, disaster management, environmental management and conservation. In fact to build the capacities of various stakeholders extensively, climate change should be introduced at the university level as one of the subjects for specialisation as a stepping stone to bring wide awareness.

A safe future is possible. The Gorakhpur experience of disaster management has been shared with all 600 plus districts of India through a training module developed by the National Institute of Disaster Management (NIDM). Will local governments in India embrace the path to its future? Only time can give that answer.

### **Acknowledgements**

Authors are thankful to the **citizens of Gorakhpur city**- people who are struggling with vulnerable conditions for decades and still continues to have faith in achieving a better place to live for future. Their effort acted as prime inspiration for this paper. Once, Gandhi said: "Power resides in the people" and that is how 'Swaraj' described a mechanism to empower both 'people' & 'state' during independence. Authors showcased Gorakhpur's struggle for resiliency as a real life example to justify the validity of such utopian ideology in contemporary scenario after 68 years of independence.

Also, authors are grateful to the incredible effort **Rockefeller foundation** has been able to put to document and publicize this inspiring effort of **ACCCRN** and **ISET** for last few years to make people aware of 'Resiliency'. The paper has got maximum reference of its base framework from their publications only.

Lastly, this paper would not have been completed without constant support from two persons. **Professor Suzanne Frasier** from Department of Undergraduate Design and Construction of Morgan State University, whose valuable suggestions at different stages helped to frame this research work more accurately and **Miss Niyanta Muku**, whose confidence and enthusiasm inspired more than enough to make this effort successful over time.

### **Disclosure Statement**

Authors declare that they have no relevant or material/ financial interests that relate to the research described in this paper. As per authors' knowledge, there is no such relationships/ conditions/ circumstances further that present a potential conflict of interest for any kind of readers. Authors do not possess any kind of patent (planned/ pending or issued) related to concerned work. In addition to that, the data has presented for purely academic purpose and does not violate any privacy rules for respective renowned sources which have been mentioned with proper acknowledgment at different places.



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**Professor Suzanne Frasier**, is an academic and design professional with over 20 years of experience in the design and construction industry prior to becoming a full-time Associate Professor at Morgan State University's School of Architecture and Planning, Baltimore. She has also been a faculty member at the New York School of Interior Design since 1988. She is the author of numerous theoretical and applied papers on architecture and design pedagogy, and sustainable consumption in urban developments. She was awarded Fullbright-Nehru Teaching and Research Fellowship in 2012 which she completed in affiliation SPA, New Delhi. She was an **advisor** for concerned research paper.

## Endnotes

According to National Census Authority, India has a population of 1.252 billion. (2013)

India has suffered a loss of over INR 10 billion plus due to the adverse winter weather in January 2013 alone. (Saraswathy, 2013)

Aam Aadmi' - literal translation 'common man' - is a Hindusthani colloquial expression and the equivalent of 'the Average Joe'.

NDMA - National Disaster Management Authority, India

TERI - The Energy and Resources Institute, India

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TERI, *Climate Proofing Indian Cities: A Policy Perspective*, March 2014, chap.2.

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GEAG- Gorakhpur Environmental Action Group

Rana P.B Singh, *Urban Planning of the Heritage City of Varanasi (India) and its role in Regional Development*.

According to Census 2001, the city has a total population of 622701 with an average density of 4559 person/km.

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The black line represents historic, observed temperature from 1961-2000. The solid colored lines represent the biased simulations, the dotted lines the corrected simulations.

The solid coloured lines are the scenarios before bias correction. The dashed lines are the scenarios after bias correction.

This interview was quoted from a documentary film 'For a Safer Future- Insights on climate resilience from India' as an outcome of the research project on Mainstreaming Climate Change Adaption and Disaster Risk Reduction in Development Planning which was implemented in joint collaboration of 'Gorakhpur Environmental Action Group', 'Institute for Social and Environment Transition' and 'National Institute for Disaster Management'

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## Image Source

Figure 01: Indian Express, Digital Archive, <http://indianexpress.com/article/india/india-news-india/us-offers-assistance-for-chennai-flood-victims/>.

Figure 02: Gorakhpur Environmental Action Group(GEAG), *Rooting Resilience in Odds*, 06.

Figure 03: Illustrative diagram of river (source- author) & Photograph of Varanasi Ghats- Classical India, Digital Archive, <http://www.departuresandarrivals.travel/classical-india/>.

Figure 04: Illustrative diagram of city growth (source-author)

Figure 05, 06 & 07: GEAG Resource Centre, Digital Archive

Figure 08: Gorakhpur Environmental Action Group(GEAG), 2009: 3

Figure 09: Gorakhpur Environmental Action Group, Wajih et al., 2010: 23

Figure 10 & 11: Opitz-Stapleton, 2009

Figure 12: Amit Mitra, GEAG Resource Centre, Digital Archive

Figure 13, 14 & 15: GEAG Resource Centre, Digital Archive

## Table Source:

Table 01: NIDM, *Disaster & Development*, 2013: 22



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# THE RECONSTRUCTION OF GIBELLINA AFTER THE 1968 BELICE EARTHQUAKE

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**Federica Scibilia**

Universita degli Studi di Palermo

On 15 January 1968 a catastrophic earthquake struck the Belice Valley. In some cases in the reconstruction plans it was decided to abandon the old settlements and to build new ones in different places. Among these centers Gibellina was the most damaged and the town was built away from the old settlement in an area within Salemi, where the highway and the railroad converged, in an attempt to take away the new center from the isolation in which it had lived for centuries. For the reconstruction of the town a development plan was drawn up by the Institute for Social Housing Development (ISES). This Institute was assigned the task to elaborate the general plan, designed in an extensive urban model alien to the identity of the local population and it was responsible for the primary and secondary urbanization works. At the same time the earthquake was the pretext for experimenting with significant projects by famous architects and artists, who were called to intervene in the new center. This study aims going deeply into the case of Gibellina by analyzing its urban plan. Particular attention will be given to the comparison between the old and the new urban settlement.

**Keywords**

earthquake, reconstruction, Belice, urban planning.

**How to Cite**

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DOI: <http://dx.doi.org/10.7480/iphs.2016.2.1245>

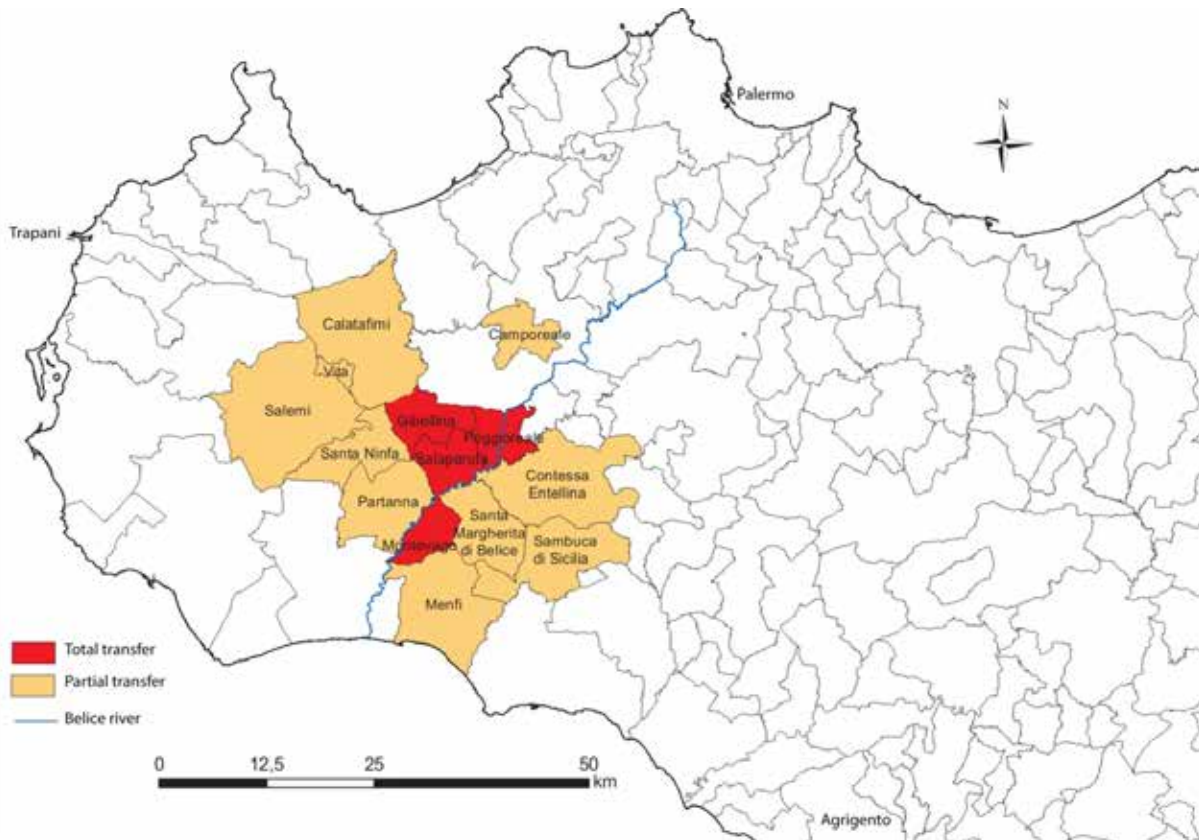


FIGURE 1 The fourteen centres of the Belice Valley struck by the 1968 earthquake

## INTRODUCTION

On January 15 1968, there was a catastrophic earthquake, which struck a vast area of western Sicily in the provinces of Agrigento, Palermo and Trapani, including, to varying degrees, fifty municipalities. The damage was massive and mainly located in the fourteen centres of the Belice Valley, which had a poor, mainly rural economy, where the buildings were typically modest and characterized mostly by materials and construction techniques of poor quality. In these centres, the destruction caused by the earthquake brought about radical changes in the urban structure, and in some cases the abandonment of the original historic centres. In fact, in the centres mentioned, local strategies put in place after the earthquake were based on new construction in urban centres, rather than the reconstruction of the existing areas (fig. 1). There were plans to give up the old settlements, raze them and build new ones in different places, often located at a considerable distance from the original sites, resulting in a physical separation of the inhabitants from their roots. In particular, of the fourteen municipalities affected by the most extensive reconstruction, only Gibellina, Montevago, Poggioreale and Salaparuta were classified as subject to full transfer, because of the substantial percentage of damage to the housing stock. The towns of Calatafimi, Camporeale, Contessa Entellina, Menfi, Partanna, Salemi, Sambuca, Santa Margherita, Santa Ninfa and Vita, on the other hand, underwent partial transfer programs.

This article specifically aims to examine the plan for the new centre of Gibellina, in the province of Trapani, highlighting its peculiarities through a comparison between the characters of the old and the new urban settlement.

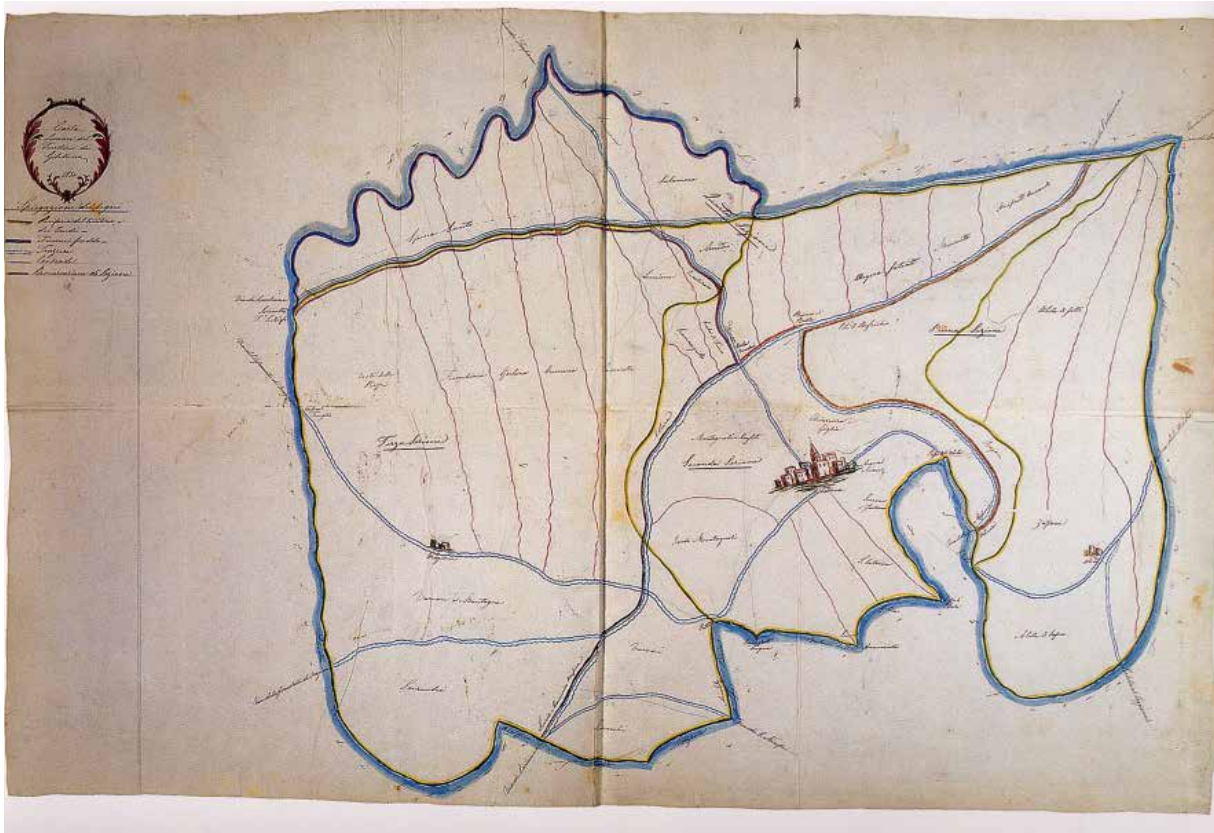


FIGURE 2 Old Gibellina. Plan of the territory, 1850.

## CHARACTERISTICS OF THE SOCIO-ECONOMIC CONTEXT BEFORE THE EARTHQUAKE

Like the many other small rural towns in the hinterland of Sicily, Gibellina was a marginal area in the social and economic context on a regional and national level, and was affected by a considerable degree of economic depression. The population, which was 6,005 inhabitants in 1967, subsisted on an agricultural type economy, based on the production of cereals, carried out with backward methods that were inadequate for any kind of large scale production. The only other activities were the small family run craftsmen's workshops for producing essential goods. Isolation was made worse by poor transport links with the towns on the coast, caused by an inefficient road system, in the context of a more general state of decay of the infrastructures of the hinterland of the island<sup>1</sup>.

The economic depression had a direct effect on social conditions, which were characterised by a widespread state of instability and low levels of literacy. There was no plan for real development in the area, as a result of the historically recorded lack of commitment to the Southern regions of Italy by the government.

The population had a somewhat limited income and there was a high level of unemployment. The main alternative was immigration, which involved large parts of the active population, but did not produce an appreciable easing of the pressure on local resources or an improvement in economic conditions, but rather a decline in the work force available in the area, which was made up of an aging population.



FIGURE 3 The “Cretto” by Alberto Burri in the Old Gibellina area.

## THE URBAN LAYOUT AND THE ARCHITECTURAL EMERGENCIES OF THE OLD CENTRE

The original urban centre stood on the right side of the Belice Valley, in a fairly inaccessible position. The built up area was clearly separated from the surrounding countryside (fig. 2). Unlike many towns of the Belice Valley, whose configuration before the 1968 earthquake is well documented, trying to reconstruct the appearance of Old Gibellina, is a daunting task. The reasons for this are the lack of documentary and iconographic sources available, the scarcity of monumental architecture, and, finally, because the surviving ruins have become the site of a work of contemporary art, the Cretto by the artist Alberto Burri (fig. 3).

The urban identity of the old centre was mainly defined by religious buildings, which were not monumental, and small modest residential constructions, simple from the point of view of typology and materials used, and characterized by a strong uniformity.

By combining the little documentary data and the rare iconographic documentation (graphic and photographic)<sup>2</sup>, it has been possible, at least partially, to recreate an image of the town and to evaluate its structure from an urban and architectural point of view.

According to local historian Baldassarre Ingoglia, the origin of Gibellina dates back to the Arab era, as suggested by the place names and the etymology of the name Gibellina itself<sup>3</sup>. However, the lack of references to the existence of Gibellina in the accounts of Arab travellers and in maps from that time would suggest that this is not the case, although the existence of a hamlet at that time cannot be ruled out. Although the origins of the town have not been established with any degree of certainty, its existence at the end of the fourteenth century can be confirmed. It was during this period that Manfredi Chiaromonte had a castle built on one of the five hills surrounding the territory of Gibellina, in a fiefdom called Busecchio, where the first settlement appeared.

The foundation of churches and monasteries of the mendicant orders, mainly by the Morso family - an aristocratic dynasty that attained the barony of Gibellina for the first time in 1498, with Giovanni, but only held the feud continuously from 1548 onwards, with Antonino<sup>4</sup> - gave a new structure to Gibellina, and also resulted in some choices relating to the urban layout.

The layout of the main roads, called Via delle Corse (after Via Roma) and Via Umberto I, was defined by the placement of the convents of the Franciscans, Carmelites and Augustinians at each corner of an ideal triangular shape, in line with a recurring pattern in the arrangement of buildings of the mendicant orders. The convent of the Franciscan, with the church of San Francesco (started in 1570 and destroyed in the 1850s), was located in the north of the town in the place then occupied by the Di Lorenzo Palace, in a street with the same name; the convent of the Carmelites, with the adjoining church of the Carmine, both dating from the fifteenth century, were located east of the castle; finally, the Augustinian monastery, with the church of San Nicolò, both founded in 1619 by Antonio Morso, were located in the western part of the town.

Via Umberto I, the main city street in the north-south direction, separated the town into two areas, acting as a dividing line between the old centre, located to the east around the ruins of the castle, and the new expansion areas to the west (fig. 4).

This street, together with the axis of Via delle Corse, situated in a position almost at right angles to the previous one (east-west), and the other road layouts that were almost parallel to it, divided the town into six districts: Santa Caterina, Pizzo di Corte and Acqua Nuova in the eastern part (the oldest), which were characterized by an apparent incoherence, with roads whose layout was more closely related to the orographic characteristics of the land, and Sant'Antonio, Zubbìa and San Nicolò in the western part (of more recent construction), whose road layout was later to become the location of the houses of the nineteenth-century middle classes. The construction areas were arranged along variable parallel lines based on the urban sectors, creating a rather complex overall system. The old urban fabric located to the east, which took shape between the 16th and 18th centuries, was characterized by well-cut and rather wide roads and three squares (Matrice, Market and Garibaldi). Matrice Square, which the Mother Church looked out over, was the fulcrum of the entire urban system.

The only architecture of a certain value of which an iconographic documentation remains was the Mother Church. The date of its foundation is uncertain, but the building, initially dedicated to Purgatory, was restructured several times between 1540 and the eighteenth century. In addition to the Matrice and the churches of the mendicant orders, there were also some seventeenth and eighteenth-century churches<sup>5</sup>.

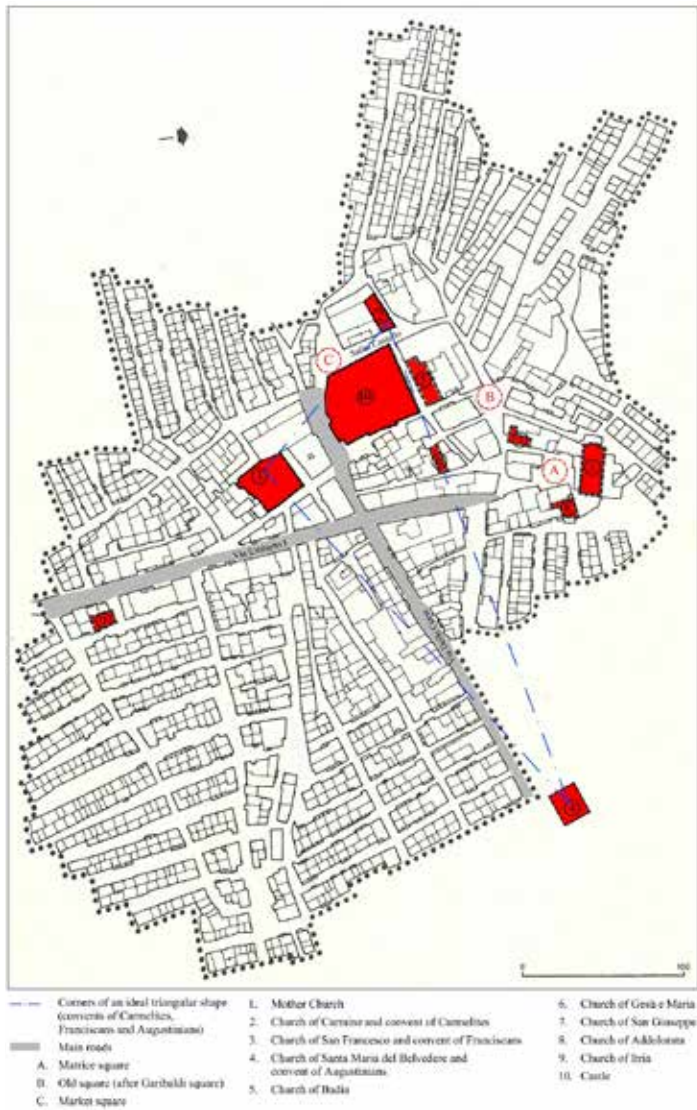


FIGURE 4 Old Gibellina. Design of the cadastral plan.

## THE EFFECTS OF THE EARTHQUAKE ON THE SOCIO-ECONOMIC FABRIC

The earthquake aggravated the already unstable socio-economic conditions in the area, highlighting a pre-existing state of crisis. The impact of the earthquake on work activities caused an interruption in the established methods of land management by destroying infrastructure as well as homes and rural working buildings. Like other towns hit by the earthquake, Gibellina was affected by a rapid acceleration in the already significant phenomenon of migration to Northern Italy and the countries of Northern Europe. It was estimated that following the earthquake, about 50% of the population emigrated temporarily<sup>6</sup>.

In an atmosphere of urgency, the main priority was to respond to the housing crisis. Following common practice in similar circumstances, two shanty towns were therefore constructed to house the large number of homeless, one located in the Rampinzeri area and the other in Madonna delle Grazie, physically separating the population into two settlements.

Being suddenly forced to live in temporary shelters and give up their usual habits heightened the pessimistic attitude of the inhabitants of Gibellina, which manifested itself in the pursuit of charitable interventions from public bodies.



## THE CONSTRUCTION OF NEW GIBELLINA

The first legislative action aimed at reconstructing the areas affected by the earthquake in Western Sicily was the D.L. 27/02/1968, subsequently converted into Law 241 of 1968, which provided the first funds for reconstruction. In April 1968, the Institute for Social Housing Development (ISES) had already been commissioned to plan the building reconstruction of the affected areas<sup>7</sup>. Additional supplementary provisions on allowances for the benefit of the areas affected by the earthquake were put in place by Law no. 858 of 1968.

The ISES, established by Law no. 133 of 15/02/1963, was set up as a technical body with its headquarters in Rome. It was in charge of social housing around the country, and also had the task of intervening in cases of housing reconstruction after natural disasters. The body was highly centralized and linked to the government, since its actions were directly carried out by experts appointed by the Ministry of Public Works.

According to article 59 of the D.L. 27/02/1968, the reconstruction of the disaster areas was to be aimed at reorganising and relaunching the local economy, rehabilitating the population, and providing an alternative to emigration. According to the propaganda that accompanied the State reconstruction, a radical structural and infrastructural operation was to be carried out through investment in the industrial sector, which would have guaranteed work and wellbeing for the population. The reality was very different from what had been announced. The industrial installations were never put in place, and necessary steps were never taken to support the recovery of the farming and craftsmen's activities that, although small in scale, sustained the population and guaranteed the continuity of a tradition.

The interventions were initially implemented on the basis of the Western Sicily Territorial Coordination Plan promoted by the ISES. In its first phase, this plan involved the municipalities concerned, a special decentralized office of the Ministry of Public Works, and the General Inspectorate for the Earthquake Zone of Sicily, based in Palermo and established by the aforementioned law 241 of 1968. The Inspectorate was responsible for approving projects, allocating funds and contracts, and the technical and administrative management of the works, services and supplies, and also included a technical-administrative committee, chaired by the Director of Public Works and made up of a number of experts.

The activity of the ISES in the Belice area is documented up until 1974, when the Ministry of Public Works decided to transfer responsibility for the management, support and accounting of the work to the autonomous sections of the Civil Engineering Department responsible for the area.

An initial reconstruction proposal involved joining Poggioreale, Salaparuta and Gibellina together into one big urban centre, in the belief that it would be possible to create a conglomeration with better health, education, sports and administrative services, which would have been difficult in separate small towns with a population of about 5,000 inhabitants. However, opposition from the local authorities led to the abandonment of this proposal and the decision to create three new towns in three separate locations, different from their original ones, chosen according to criteria regarding proximity to infrastructure and favorable orographic conditions.

For the reconstruction of Gibellina, as with the other fourteen towns in the Belice valley, the ISES drew up a town plan coordinated by the engineer Marcello Fabbri. The new settlement was to be built about 18 km from the old one, in an area in the district of Salemi, in Contrada Salinella, at the meeting point between the main road, the Palermo-Mazara del Vallo motorway and the railway. This decision arose from the need to connect the city to the regional road network, in an attempt to take the new centre out of the isolation that it had been in for centuries. However, the most immediate effect was to distance the people from the original agricultural areas in which most of the population worked and earned a living.

The decision to build a town *ex novo* after a catastrophic event, although not in line with the prevailing trend of rebuilding towns *in situ*, was not a new idea, as it had already been done in Sicily, for example in the case of Noto, whose old settlement was destroyed after the earthquake of the Val di Noto (South Eastern Sicily) in 1693, and abandoned to found a new city<sup>8</sup>.

An attempt at developing a plan based on the social and economic reality of the area was proposed by the sociologist Danilo Dolci<sup>9</sup>. When explaining the methodology used in his proposal, he maintained that his plan did not have just one author and stated, «it has thousands of authors, tens of thousands of people that have been heard and consulted, from the illiterate, who have established experience of their land, to the educated, technicians and experts of the highest scientific level»<sup>10</sup>. He emphasized that the plan's goal was to «make an effective tool available to policy makers, and (...) an educational tool with which awareness can lead to practical solutions, through articulated cultural and political pressure, available to everyone»<sup>11</sup>. A draft of this plan was sent to the relevant authorities. However, although it had resulted from the participation of civil society, and caught the attention of prestigious names in architecture and town planning, such as Bruno Zevi<sup>12</sup>, Carlo Doglio and Leonardo Urbani, it was not taken into account in subsequent planning decisions.

In addition to the overall plan the ISES was responsible for the works of primary and secondary urbanization, including: the social housing, all of which is almost identical apart from subtle variations in distribution (used in all the reconstructed towns); school buildings (nurseries, a kindergarten and a secondary school); a cemetery and a community centre, as well as the livestock market and agricultural fair.

The site plan of the new city (fig. 5) was designed according to an urban model that was alien to the identity of the local population. It does not contain any reference to the old urban settlement, based on a cross roads as the layout for the streets, or to the pre-existing building types. The new plan is made up of two planimetric blocks that form an organic “butterfly wing” shape, centred on a longitudinal axis running East-West. The main facilities are located along this road axis, while the residential areas, made up of terraced houses, extend out to the sides, divided into four allotments.

The design of the plan reflects the town planning ethos of the sixties, which faced with the uncontrolled growth of large cities, had developed settlement models based on functional zoning.



FIGURE 5 Planning Study designed by I.S.E.S.

In Gibellina the building criterion applied is of an extensive type, characterized by flat architecture spread out over the land, made up of single-family two storey detached houses, based on the urban model of the Anglo-Saxon garden city. There are isolated houses with a small green space for each individual dwelling, and also a strong hierarchy between vehicular and pedestrian traffic.

The wide streets and squares are clearly oversized for the population, whose work was related mainly to agriculture. This was the result of an indiscriminating use of town planning models alien to the culture of settlement in the area, triggering problems of identity in the population, which have not yet healed.

The reconstruction works of the new centre, which only started in 1971, went ahead in an atmosphere of heated debate and were characterized by delays and red tape. As a result, the initial urbanization works were only finished in 1976, and the following year the first 150 homes were completed.

The buildings and spaces for the community were added to the anonymous residential districts of social housing. They took a very long time to build and were subject to variations and frequent interruptions on the building site.

From the eighties onwards, a critical review of the urban plan of Gibellina was carried out by the Design Laboratory “Belice 80” coordinated by the professor Pierluigi Nicolini<sup>13</sup>, following which questions were asked about how to give identity back to a residential fabric considered abstract and inadequate.

At the same time, the rebuilding process offered a pretext to experiment with important designs created by well-known architects and artists, called on to produce works for the new centre by the Mayor, Ludovico Corrao, who was very active in the debate that developed around the difficult problem of reconstruction<sup>14</sup>. He helped make Gibellina a real museum of modern architecture, thanks to the extraordinary number of architects and artists who worked on its reconstruction, making it a unique experience on an international level.



FIGURE 6 The System of Squares

Some of the most important examples of the season of great cultural excitement that swept the town from the seventies onwards are:

- the Mother Church by Ludovico Quaroni, designed in 1972 with Luisa Anversa;
- the Cultural and Trade Center by Vittorio Gregotti (1976-1982)
- the Baglio Di Stefano by Marcella Aprile, Roberto Collovà and Teresa La Rocca (1981-1990);
- the Pharmacist's house by Franco Purini and Laura Thermes (1981);
- the Di Lorenzo Palace by Francesco Venezia (1981, 1983);
- the System of Squares (fig. 12) designed by Laura Thermes and Franco Purini (1982-1990) with the Civic Tower by Alessandro Mendini (1988);
- the Theatre by Pietro Consagra (1984-2007);
- the Secret Garden by Francesco Venezia (1984, 1987), who also designed the Exhibition Building (1985-87) and the Secret Garden II (1986, 1991);
- the Pirrello House by Franco Purini and Laura Thermes (1988-1990);
- the complex of housing and services on the axis of the social centre by Oswald Mattias Ungers (1988-1990).

In addition to the architecture, urban redevelopment was promoted by the creation of works of art and installations, located in various different places within the urban fabric and designed by avant-garde artists, starting with the famous Gate of the Belice by Pietro Consagra (1980), which marks the entrance to the town.

## CONCLUSIONS

In the case of Gibellina, like Poggioreale and Salaparuta, the destruction of the old town after the earthquake of 1968 and the subsequent choice to found a new one have resulted in a permanent loss of identity, which was once focused on a few recognizable elements. This situation has contributed to increasing the sense of alienation of the population towards the new settlement, increased by the indiscriminate application of town planning models alien to the local culture, and the lack of any real consideration of the specific conditions of the place, the history and significance of the old town, and the real needs of the inhabitants.

Although the earthquake, as in other cases of post earthquake reconstruction, provided a fertile terrain for experimentation and renewal through an affirmation of the “modern”, the individualism underlying these works has not succeeded in giving the urban spaces that necessary character of unity, leaving the pieces of architecture as decontextualized models.

This idea is expressed in the critical review by Nicolin of the work carried out in New Gibellina. Referring to the relationships between urban areas and the local population, he noted that, «while the number of individual interventions with quality works continues to grow, (...) there is still no idea of the town itself. And this reminds us that it takes more than buildings to make a town»<sup>15</sup>.

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## Notes on contributor

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Figure 1 - Graphic processing by the author.

Figure 2 - Le mappe del catasto borbonico di Sicilia. Territori comunali e centri urbani nell'archivio cartografico Mortillaro di Villarena (1837-1853), a cura di Enrico Caruso, Alessandra Nobili, Palermo, Regione Siciliana. Assessorato dei Beni Culturali ed Ambientali e della Pubblica Istruzione, 2001.

Figure 3 - Photo by the author.

Figure 4 - Gangemi, Giuseppe, La Franca, Rosalia. Centri storici di Sicilia: inventario di protezione dei sistemi urbani delle province di Trapani, Agrigento, Caltanissetta, Enna. Palermo: Vittorietti, 1979, graphic processing by the author.

Figure 5 - ASPa, I.S.E.S., b. 27.

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# A STUDY ON POST-CONFLICT REDEVELOPMENT OF BEIRUT CENTRAL DISTRICT: PLANNING, IMPLEMENTATION AND IMPACTS

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Beirut, the capital of Lebanon, is not only a key urban metropolis in the Middle East, but also a city of historical heritage and rich culture. Unfortunately, Beirut was the battlefield for a lot of conflicts in the last few decades. Those conflicts had disastrous consequences on the city especially The Lebanese Civil War (1975-1990) which not only left Beirut Central District in devastation due to its “fierce battles and barbarous cruelties” (S. Khalaf, 2006) and but also had a heavy toll on the whole country. Solidere (The Lebanese Company for the development and reconstruction of Beirut Central District) was formed for the project of rebuilding the heart of Beirut after the civil war. This paper aims to discuss the project’s impacts on the city from an urban resilience perspective and assess its contribution in creating a resilient city of Beirut in case of future conflict taking place. The redevelopment project was on a large scale and it might be considered as “one of the world’s most significant and challenging urban regeneration projects in implementation at the turn of the millennium” (A. Gavin, 1996). After years of redevelopment process, current Beirut has made major recovery steps on both infrastructure and planning level, however, the post-conflict redevelopment in Beirut has created its own issues and proposed many questions about its impacts on the city’s social and physical form. As a result, the redevelopment project drew researchers’ interest regarding aspects of sustainability (G. Bădescu, 2011) or issues of tradition and modernity (A. Sawalha, 2013). However, this paper explains the issues of the actual implementation of the plan by comparing the proposed design provided in the original plan with the actual implementation observed in field survey. In addition, the paper aims to make clear the role the redevelopment in strengthening urban resilience in Beirut by examining its response to the origins of the conflict in the planning process.

## Keywords

Beirut Central District, Post-conflict redevelopment, Urban Resilience



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# "BE BOLD, COURAGEOUS AND WISE": POST-WAR RECONSTRUCTION IN THE CITY OF EXETER

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The city of Exeter sustained extensive bomb damage during the Second World War, suffering a total of 18 air raids between 1940 and 1942. Exeter was designated as a blitzed city and encouraged to produce a comprehensive reconstruction plan. The resultant plan, *Exeter Phoenix*, was initially praised and welcomed by traders and citizens. However, it was not fully executed and later became the subject of derision. The *Exeter Phoenix* has been the subject of a small number of studies which have cited trader pressure and financial constraints as the reasons for the alterations, while the rebuilt central area has been criticised for its architecture, design and poor architectural control. However, it is notable that these studies have not examined the local records in any detail. As a result various factors which led to changes in Sharp's plan have been overlooked, as have the methods which the City Council used to control the architectural treatment of the new buildings. This paper examines the city's use of leases as method of architectural control and the handling of trader discontent in order to execute the plan. External factors such as governmental guidelines are also indicated as factors for changes in the plan.

## **Keywords**

Exeter, reconstruction

## **How to Cite**

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## INTRODUCTION

At the outbreak of the Second World War, Exeter was a quiet South Western city with a population of approximately 70,500.<sup>1</sup> It supported a variety of small industries, from leather work to small foundries, and was the main retail centre for East and Mid Devon. At the start of the war Exeter therefore seemed an unlikely target for enemy bombing raids. The city had no strategic importance as it was not a military or industrial centre, nor was it a particularly populous city.

Exeter, like many of the towns in the South West, suffered a number of minor 'tip and run' bombing raids during 1940 and 1941, which caused minor damage to residential areas around the edge of the city. The city became a specific target in 1942 as part of the 'Baedeker' raids, which targeted cities renowned for their historic or architectural importance. Exeter suffered four raids as part of this campaign, with the worst raid being the night of the 3<sup>rd</sup> and 4<sup>th</sup> May, when an estimated 10,000 incendiary bombs and 75 tons of high explosive fell on the city.<sup>2</sup> The raid and subsequent fires left much of the city centre in ruins, with over 400 shops and 150 offices destroyed.<sup>3</sup> The cathedral and Fourteenth century guildhall escaped serious damage, but other architecturally and historically important buildings were destroyed. Exeter also lost a significant proportion of its housing, as there were sizable residential areas immediately behind the main city centre streets. The housing losses were heavy for a city of Exeter's size, with 1,500 of the city's 20,000 houses completely destroyed and a further 2,700 seriously damaged.<sup>4</sup> The city's losses are best expressed through the loss of rateable value, with a loss of 14.8% of total rateable value.<sup>5</sup> In comparison Plymouth and Coventry, widely acknowledged as the worst damaged British cities outside London, lost 17.5% and 3.4% of their rateable values respectively. Exeter was therefore facing a reconstruction task comparable to any other blitzed city.

The City Council responded swiftly to the May Raids, assisting traders in finding temporary premises and enquiring with the Board of Trade about erecting temporary shops. The response was resoundingly negative, with the Board of Trade reminding the city they were not alone in their plight and that all resources had to be directed toward the war effort. It was recommended that instead the City should begin planning for rebuilding, so that a swift start could be made once the war was over.<sup>6</sup>

## CONSULTATION AND CREATING THE PLAN

The reconstruction plan for Exeter was the creation of one man, planner Thomas Sharp. The City Council initially agreed on the use of a consultant planner in February 1943, but stalled the appointment to investigate the possibility of an in-house approach.<sup>7</sup> The City Engineer and Architect departments felt they were unable to take on the work owing to their small wartime staffs, which led to Sharp's appointment in October 1943.<sup>8</sup> The use of a single consultant planner would suggest a 'top down' approach to planning, but City Council undertook a consultation process with traders and citizens ahead of Sharp's appointment. Sharp also worked closely with the City Architect and City Engineer, using their expertise to inform the plan.

The City Architect's and Engineer's departments had undertaken initial surveys into the city's problems and post-war needs prior to Sharp's appointment, and had already surveyed blitzed traders for their views. In addition to this calls for citizens to give their ideas and views about reconstruction had been made via the local press in 1942 and early 1943.<sup>9</sup> A wide range of local organisations had been approached for ideas from the expected traders groups - such as the Chamber of Commerce - to architectural groups, the Women's Institute, the Exeter Gardener's Society and the English Folk Dance and Song Society. Individuals were also encouraged to submit ideas and plans, with at least one complete city plan from an individual being received and examined.<sup>10</sup> This wish to consult appears to have been one of the factors in delaying the appointment of Sharp. The Council evidently wanted the preliminary survey work to be completed before a consultant was appointed, presumably to speed

up the planning process, but also wanted to complete the public consultation to ensure that the citizen's voice was heard in the process.<sup>11</sup> This concern for consultation challenges the idea of the planning process being 'top-down', with the views of ordinary Exonions being ignored. The completed plan was also exhibited in December 1945 and the public were invited to submit their opinions to the Council. The exhibition attracted 28,000 visitors, amounting to almost half the wartime population of the city and demonstrating the interest and enthusiasm of citizens in the new city.<sup>12</sup>

Sharp presented his plan, entitled *Exeter Phoenix*, to the Council in May 1945. Sharp had not taken the radical 'clean sweep' approach seen in cities such as Plymouth and Coventry, but did heavily redesign the street pattern in the worst-damaged areas. In the very centre of the city Sharp widened and straightened many of the roads and proposed an entirely new street to replace the most-lamented architectural loss of Exeter's blitz, Bedford Circus. Bedford Circus had been double-crescent of Georgian townhouses and had been considered the finest example of its type in the country.<sup>13</sup> Sharp felt that trying to recreate this landmark, or any of the other lost areas of the city, would result in a 'dead museum of a city.'<sup>14</sup> Instead he recommended the building of a brand new street, later named Princesshay, which would stand as a monument to the lost city and open up new views of the Cathedral for future generations to enjoy.<sup>15</sup> Sharp proposed new bypass to carry through-traffic from the main A30 and A38 trunk roads around rather than through the city. This bypass would also create a new city square where several of the city streets met, which he felt would provide a second focal point for the city. Provision was made for many new public buildings and the riverside area was designated as parkland. The riverside park required the removal of the city's industries away from the river, with a new industrial district being created on adjoining land to the south of the river. A further industrial area was created on the eastern side of the city, in order to spread industry and jobs more evenly. Sharp also included residential plans that would reduce the city centre population, suggesting estate designs along the 'neighbourhood unit' principal.<sup>16</sup> The *Exeter Phoenix* was met with general praise, although the concerns over the potential cost were expressed.<sup>17</sup> The latter position was taken by the City's MP, John Maude, but caution at 'cheeseparings' in planning was sounded by the City's Mayor, Glave Saunders. Glave Saunders reminded the City Council and the wider public that the city needed to be 'bold, courageous and wise' in planning and must remember that it was planning not just for the immediate post-war period, but for future generations.<sup>18</sup> This latter view was echoed in letters from citizens in the local press who wished to see a better-designed city rise from the ashes of war.<sup>19</sup>

## CHALLENGES AND SOLUTIONS

The changing attitudes to the *Exeter Phoenix* and the challenges the City Council faced in executing the plan are best demonstrated through the 1946 public enquiry into the plan and the City's later relationship with traders and development companies. The *Phoenix* plan was cautiously welcomed by traders in 1945, but the full implications of the 1944 town planning act, and in particular the compensation available to property owners, fuelled concerns at the cost of replanning. The majority of objections raised at the public enquiry were related to the loss of cost of work payments through site reallocations and the loss of freeholds due to the compulsory purchase of central land by the Council. The latter appears to have been something which traders were willing to accept in order to replan the city centre while the cost of works payments were expected to be made mobile. The loss of both freeholds and the more valuable cost of works payments was seen as a betrayal by both government and local authority.<sup>20</sup> It is notable that it was the larger traders and businesses, both independent and multiple, which raised such objections at the public enquiry, presumably because they owned rather than rented their sites.<sup>21</sup> The remaining traders appear to have been content to rent a site from the Council and merely wished to be as close to their old site as possible.

The public enquiry reveals that some High Street traders formed a group and requested to be allowed to rebuild their sites as a block. In return for retaining their freeholds, they would give the Council 'the most valuable part of the sites', i.e. the frontages, to allow for road widening.<sup>22</sup> This request reflects a widespread trend in blitzed cities during the late 1940's for property owners to pressure councils into abandoning their plans and allowing rebuilding on a more piecemeal basis. It was frequently suggested that allowing rebuilding in this way would be faster and more economical than choosing wholesale replanning. This suggestion and the deteriorating relationship between property owners, traders and local authorities in Exeter reflected the frustration amongst the former at the delays in starting rebuilding. Traders in particular blamed the City Council for the delays, stating that the Council's determination to replan was causing unnecessary delays in rebuilding.<sup>23</sup> At this time commercial building was severely restricted by central government, with only housing and industrial building being approved. This restriction on building was well publicised, with various government departments, including the Ministry of Town and Country Planning and the Board of Trade, recommending that blitzed cities concentrate on finalising plans and leases during the hiatus.<sup>24</sup> It is evident that at least some of Exeter's traders understood the position and the general direction of resources to the export trade, as at least one Exeter trader wrote to the Board of Trade to highlight their own small contribution to exports. It was hoped that if all smaller businesses followed suit, some relaxation in the building restrictions might be obtained.<sup>25</sup> With this in mind, it is difficult to understand why traders were so insistent that the delays in beginning reconstruction were due to the local authority. It is possible that the progress in housing gave the impression that materials and labour were plentiful and it was the Council's direction of these resources which was at fault. The reluctance of the City Council to accept non-traditional housing, used to spare scarce traditional building materials such as timber and steel, may have added to this impression. The suggestion that diluting reconstruction plans would speed up rebuilding did lead to some cities making drastic changes to their plans. The need to create rateable value in order to carry out other necessary building, such as housing, added to this pressure, which combined with the demands of traders and property owners became too much for some cities, most notably Portsmouth and Hull, to bear.<sup>26</sup> It is understandable therefore that it has been assumed that the same process led to changes in Exeter's plan, particularly in light of the public enquiry.

The City Council proved itself to be flexible in the application of the plan, but refused to entirely compromise in replanning the city. The enquiry led to the changing of the service roads to the rear of the High Street to allow for deeper sites, which some traders had requested.<sup>27</sup> Minor alterations were also made to ensure that access to standing properties would not be affected.<sup>28</sup> However, the requests from some traders be excluded from the plan were denied in order to create uniform land ownership and tenure across the reconstruction area.<sup>29</sup> Other changes which were later made to the layout of the city centre were not the product of trader pressure, but changes in government guidelines for rebuilding and financial constraints.

The assumption that trader pressure resulted in changes to the plan appears to mostly be attributed to the retention of one building belonging to the Co-Operative Society and the changes to zoning for one part of the central area.<sup>30</sup> In the case of the Co-Op building, it is suggested that as a large multiple trader the Co-Op was able to exert such serious pressure on the Council that it was allowed to retain its building.<sup>31</sup> This was significant because retaining the building shortened and changed the line of the new street, Princesshay. The building was actually retained because of new government restriction on the demolition of standing property introduced in 1947. Under the new guidelines, buildings less than 30 years old had to be retained if they were repairable. The Co-Op building had been erected during the interwar period, and therefore had to be retained.<sup>32</sup> The restrictions on demolition of standing property also prompted changes to several of the proposed realignments of city centre roads and helped to seal the fate of the proposed bypass road, all of which would have required the demolition of much standing property.

The changes to zoning were also the product of government guidelines rather than pressure from traders. Sharp had proposed that the Sidwell Street area of the city centre should be used for multiple stores, as the bigger sites which many multiples would require could be more easily accommodated in that area.<sup>33</sup> It has been suggested that

the multiple traders were unhappy at being placed away from the traditional shopping centre and campaigned for the zoning to be removed.<sup>34</sup> There is some evidence of discontent amongst the multiple traders in the city when the zoning was suggested, but it is limited. Marks and Spencer was unhappy at potentially having to leave its existing site, which they felt was a lucrative one, and raised the issue at the public enquiry.<sup>35</sup> They were the only multiple store to raise such concerns however, and the Marks and Spencer site was also affected by proposed road changes, necessitating a site change. In contrast, several of the department stores campaigned to be placed close to one another as they felt that their customer base was similar and they needed to be close in order to compete effectively.<sup>36</sup> The zoning for Sidwell Street was dropped after the Department for Town and Country Planning recommended that the strict segregation of traders by type should be avoided and the area was rezoned as a more general shopping street.<sup>37</sup>

The accusation of weak architectural control stems from the Council's decision not to employ an architect to produce building designs and oversee the rebuilding process.<sup>38</sup> Instead, all of the buildings were designed by the in-house architects of the companies undertaking the rebuilding. It is assumed that this left the City Council with only minimal control over the building designs and resulting in an uninspiring architectural style. This assumption is based on the use of lead architects in other blitzed cities, such as Plymouth, who directed the architectural treatment of new buildings and monitored the designs submitted by companies. Exeter City Council essentially used the same method, but under the guidance of the existing City Architect and used methods which gave them a very high level of control over the buildings. The building designs may have been created by each company's in-house architect, but they were drawn to briefs provided by the City Architect which stipulated how each building or block of buildings should look. These briefs were written into the site leases which meant that once a company signed a site lease, they were also accepting the City Architect's design and guidelines for building.<sup>39</sup> This device of writing the architectural brief into the lease meant that any company which refused to follow the building brief could be threatened with the loss of their site lease. This situation did arise with several of the companies who took on city centre leases and demonstrated the control which the City Council had over the building work. The tailors, Montague Burton's, and Lloyds Bank proved the most difficult for the Council to deal with, with Burton's in particular pressing to be allowed to design their new buildings to their own specifications. Burton's fought a two year battle with the City Council over the design requirements laid out by the City Architect, claiming that the proposed design was too dull and would damage their ability to let the upper floors as office space.<sup>40</sup> Burton's at this time had their own particular brand of architecture for their stores, which was frequently criticised.<sup>41</sup> The firm demanded to be allowed to use their own designs for their new Exeter buildings and applied systematic pressure on the City Council to do so, including appeals to the Ministry of Town and Country Planning. The same pattern was repeated with Lloyds Bank over their building and Burton's and Lloyds were thought to be colluding in their objections and appeals over sites and architectural treatment.<sup>42</sup> Their complaints were not upheld, and an exasperated City Council eventually stated that their constant refusal to meet the brief, which was written into their lease, constituted a refusal of their lease and the Council would have to offer the site to other potential lessees.<sup>43</sup> The two firms reluctantly accepted the position and began to build according to the brief. The City Council had similar difficulties with the property developers Ravenseft over the materials and design for the High Street block which they built and again were able to refer to the terms of the lease to settle the dispute.<sup>44</sup> Far from being in a weak position, Exeter City Council had created for themselves a very strong set of controls over rebuilding with the clever use of the architectural brief as a condition of the site leases.

The architecture itself was also conscious choice, with the buildings of the High Street and Princesshay intended to reflect the Georgian architecture of adjoining areas.<sup>45</sup> This rather restrained style fell rather swiftly out of favour and by the 1960's was already being dismissed as old-fashioned.<sup>46</sup> The more Modernist designs of later city development reflect the shift in architectural tastes, and it seems that the modest Neo-Georgian of the central areas has never managed to shake off the reputation of an architecture of austerity and compromise.<sup>47</sup>

## CONCLUSION

It is not clear whether Exeter City Council's use of site leases to control how the city was rebuilt was a widespread practice or unique to Exeter. It was, however, an extremely effective way of keeping control over building and the plan as a whole, neatly dealing with the pressure which some multiple traders brought on the Council. It also demonstrates how local authorities could withstand the demands of 'big business', which have often been thought to be the main driving force behind post-war central areas rebuilding. What is perhaps more interesting is the relationship which the City Council had with other builders of post-war Exeter; the finance companies, developers and other multiple traders. Although the relationship with Burton's and Lloyds was extremely difficult, the city had a much less antagonistic relationship with other developers. For example, Marks and Spencer, who had raised objections to the replanning at the public enquiry stage went on to accept a High Street site, building shops to let as well as their own premises. The firm completed all blueprints and plans on time and their block was one of the first to be completed.<sup>48</sup> Even where there were difficulties with individual firms, these were usually related to the site rather than the building brief supplied by the City Council. Barclays Bank and local department store Bobby's were two such cases, with both finding the sites allocated difficult to develop for their needs. Bobby's was one of the department stores which had wanted to be placed close to its rivals and had requested a large site. They initially accepted a large corner plot but later found that it was too difficult to develop for their needs and relinquished the site.<sup>49</sup> Barclays had expressed concerns about the suitability of their site for a banking hall, but gladly accepted the plot relinquished by Bobby's, going on to develop a banking hall and two adjacent shops.<sup>50</sup> Thus the problems the city encountered with developers were minor and were mostly based around the suitability of sites rather than developers attempting to bend the plan to their own designs. Burton's and Lloyd's appear to have been the exception, and there is some suggestion that Burton's were often difficult to deal with because of their desire to press their architectural brand on the nation's High Streets.

The notion of 'top down' planning can also be partially dispelled by Exeter's example. The City Council was at pains to collect the views of traders and citizens in the early planning stages and also opened up the *Exeter Phoenix* to comment and criticism. When some traders later complained during the public enquiry that their views had not been taken into account, the Council tartly responded that the firms in question had not completed questionnaires sent to them or participated in other consultation exercises.<sup>51</sup> Additionally, Thomas Sharp had no control over or input into the actual rebuilding process once his plan was complete. Sharp had only been contracted to create the plan, not implement it, and his only input after the plan was published was his representation at the public enquiry and occasional advice requested by the Council. In this way the rebuilt city was much more the product of local voices than is credited, especially as many City Councillors were also local businessmen and understood the needs of the city.

Exeter thus provides us with a different perspective on the accepted narratives of reconstruction and demonstrates what it took to be 'bold, wise and courageous' in rebuilding.<sup>52</sup> The City also opens up further strands of research, such as the relationship between developers and local authorities and the impact of financial and economic factors on reconstruction.



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Notes on contributor

Clare Maudling was awarded a 1 + 3 studentship with the Economic and Social Research Council in 2012 to undertake an MRes in Social and Economic History and a PhD, allowing her to continue her undergraduate research into post-war Second World War reconstruction. She is now working on a thesis on the reconstruction of the South Western cities of Bristol, Exeter and Plymouth, comparing their experience to that of the larger UK cities.

Endnotes

## Endnotes)

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# FROM MAN-MADE-DISASTER TO AN EXPERIMENT OF LEARNING RESILIENCE: THE EXTRAORDINARY EXAMPLE "FERROPOLIS" IN THE LIGNITE MINING AREA IN CENTRAL EUROPE (FORMER GDR)

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## Research Questions

Is resilience building "a capacity to work with change" (Walker / Salt, 2006)? And: How can historical reflections on the process of that change and built experiments be part of these capacities?

## Case Study

An artscape experiment is being developed on the former industrial site of open-cast mining in central Europe – lignite mining areas around Leipzig-Bitterfeld – a site of development of human awareness. FERROPOLIS is being an example for it. What was once the headquarters of the mining company, the site of equipment used in open-cast mining and necessary service facilities, the base of the management, the central energy supply and logistics is being turned into an artificial new site: five disused scoop excavators and bucket excavators and depositors, each up to 150 meters long and over 30 meters high, were transported to the site and arranged as an ensemble around an arena. The huge machines which have now served their purpose awaken associations: these 'birds' from primeval times, the 'saurians' of a past industrial age are perched together to deliberate their future life in a time when their peers will have died out. Yet, by using authentic objects from the industrial past, the ensemble forms a construct of new reality in a future based on renewable energy and the transformation of the carbon based industrial society. It stands out from the usual way of redeveloping the crater landscapes of open-cast mining left by man, namely post-mining landscapes which tend to erase all traces of human intervention. Preserving history and their elements from open-cast mining at Ferropolis has created space for new post-carbon and resilient design possibilities. It is also a museum and a memorial, a steel sculpture, a venue for events ("Green Music"), a place of contemplation, a landmark, and an institution for learning resilience.

## Conclusion

Is FERROPOLIS a resilient 'city'? The experiment has begun in the time of transformation of the former GDR, to break open familiar structures, a symbol is emerging which provokes questions and answers in the approach to the legacy of industrial society. The inhospitableness of our real urban and suburban environment, of our fragmented landscape, requires risking powerful and highly symbolic counter impulses, and radical, long-term concepts. The regional strategy called "Industrielles Gartenreich" was the frame for that transformation. Ferropolis seems to mirror this necessity. As a social community, this society only provides relative security it cannot completely ensure the opportunity to take up gainful employment or to satisfy elementary needs – a key moment for resilience. During the last decade – since the EXPO 2000 in Hannover – the project became a new status. It became a model for the transformation as an experimental area for new energies, for art and new economical strategies in a low carbon and resilient future. The main result of the long-term-project on the regional level was the learning process for the regional actors to create regional resilience.

## Keywords

learning for resilience, history of a real resilience-experiment, planning history as capacity for change



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# MODERNISM AND URBAN RENEWAL IN HELSINKI: CASE STUDY OF THE KALLIO DISTRICT

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How did modernist urban planners justify the urban renewal of the old city structure after the Second World War and how was the process of renewal carried out? In my paper, I explore the renewal that has taken place in the district of Kallio, located near the city centre in Helsinki. The renewal meant the demolition of the old wooden houses in the workers' residence district with new constructions according to the mainstream international modernist ideals of the era. The demolition of the wooden houses was carried out thoroughly, as almost all of them were replaced by either multi-storey blocks of flats or large public buildings.

The main actors in the reconstruction process were local town planning authorities, such as politicians, the architectural elite, construction companies and the City Planning Department. The justified objective of the reconstruction was to replace the old wooden houses with modern, open space urban structures. This, according to the planning authorities, would make a healthier residential environment that would develop with the legitimate building code. Estimates on future population rates and maps of future solid block buildings were used as justification for the renewal. However, the other reason for the demolition was more subtle: the local political parties wanted to redevelop the area for middle-class workers.

The renewal of Kallio was a multi-step process. It involved a variety of plans, discussions on the future of the district and the permitted building volume allowed by the building code in the city. The practical implementation was usually realised with detailed plans for changes drawn up for the new buildings. The renewal process took decades, which was also reflected in the city planning ideals; they started to favour the more traditional solid-block construction in city centres.

The key points of the paper are the justified and also the more subtle reasons for the renewal; how, why and with what consequences did the renewal effect the research area. I also analyse the influences of the reconstruction in the present built environment in the area.

## **Keywords**

Urban renewal, Modernism, Post-Second World War planning



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# Planning Ideas in Motion

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Chair: *Junne Kikata*





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# THE PRESENCE OF THE GERMANIC IDEAS ABOUT URBANISM AT THE SCHOOL OF ENGINEERING FROM PORTO ALEGRE, BRAZIL (1896 - 1930)

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This paper aims at discussing the role of the School of Engineering from Porto Alegre, between the years 1896 and 1930, as a channel for the introduction of ideas about the construction of cities, according to the urbanism widespread in Germany, from the mid-nineteenth century. The present study reveals the context of Porto Alegre, the capital city of the State of Rio Grande do Sul, in the South of Brazil. From that, the study adopts the School of Engineering and some of its engineers in the period know as/called the Old Republic as a means of conducting a historical narrative, analyzing the correlations of the School, both with the Germanic presence, as with urban issues. The research investigates which ideas circulated, as well as the means or vehicles by which these ideas have come to it. Furthermore, the research identifies at least two characters who had contact with this Germanic knowledge about city planning, while they studied at the *Technischen Universität zu Berlin* and analyzes the contributions of both to the spreading of these ideas over Porto Alegre.

#### **Keywords**

modern urban planning, urban planning in Germany, transfer and resonance of ideas, urban planning history, Porto Alegre, Engineering School

#### **How to Cite**

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## INTRODUCTION

Between the end of the 19<sup>th</sup> century and the first three decades of the 20<sup>th</sup> century, the city of Porto Alegre went through major changes, involving socio-economic, populational, political - administrative and locational factors. These changes were closely linked to the pursuit of progress and urban modernization. At that time, we could identify the presence of a recent urban culture in Brazil, evidenced by the plan of Belo Horizonte, the new capital of Minas Gerais, authored by Engineer Aarão Reis, in 1894; urban reforms in the city of Rio de Janeiro, between 1902 and 1906 through the work of Engineer Pereira Passos, with avenues inspired by Haussmann's urban transformation in Paris; the plan of Engineer Saturnino de Brito for the extension of the city of Vitória, Espírito Santo, in 1896; and the opening of Avenida Paulista, in 1891, Anhangabaú Valley Plan between 1911 and 1916 and so many others improvements in São Paulo.

Within this context, Porto Alegre was also a capital city run by a strong and authoritarian government, represented by the Partido Republicano Rio-Grandense (PRR), a political party of republican motivation with explicit moral and philosophical principles, which were rooted in the positivism. The strong German presence in the capital due to the immigration that started in 1824, and the prevalence of a *Muttersprache* (mother tongue) within many social groups, including the technical environment, became important factors which contributed to the spreading of the Germanic culture.

Amongst the evidence that motivated this study, is the presence of important publications, manuals and treaties about Germanic urbanism at the Engineering School Library. Many questions emerged from documents: was there a movement of ideas in Porto Alegre regarding the Urbanism as it was known in Germany from the *der Städtebau* concept? By what means and vehicles? Through what figures? Could the Engineering School have been a path? Therefore, the present work aims at discussing the role played by the Engineering School of Porto Alegre and the contribution of some of its engineers within this context, meeting the collective effort to contribute with the field of city's history knowledge and the Urbanism in Brazil.

## THE ENGINEERING SCHOOL OF PORTO ALEGRE AND THE CONTACT WITH BERLIN

The Engineering School of Porto Alegre (Figure 1), founded in 1896, had its origin associated with a political party and is recognized as an important technical education institution, which has always preserved an active participation on the city's history. The school aimed at preparing technicians, qualifying engineers and, as we may infer, provide the State with industry, transportation and farming development.

The school's main intention was to qualify engineers, "aiming only at being useful to the motherland empowerment", by providing them with the necessary theory for the practice of the profession<sup>1</sup>. It also intended to divide the extensive science of engineering into special courses, in order to capacitate professionals more specialized in some of the different fields of engineering. The idea of courses lasting as long as two or three years, allowed people from less favourable socio-economic backgrounds to obtain a vocational qualification, so that they could become independent and useful to the country and family.

From the beginning, the teaching staff was also composed by professionals who had been closely related to the Germanic environment. Among the professors hired in 1898 was, for example, the engineer Rodolpho Ahrons, who had recently returned from his studies in the Prussian capital and who contributed substantially to the profession practice and teaching.

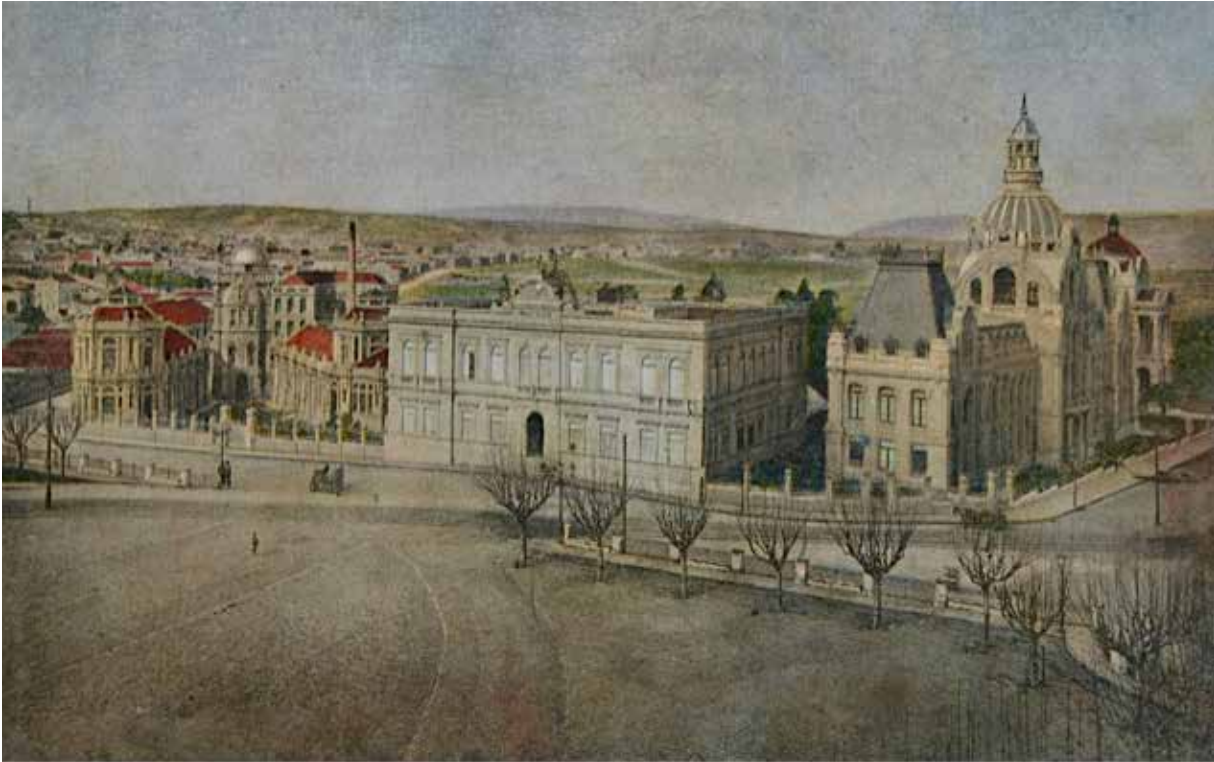


FIGURE 1 Engineering School view, 1911



FIGURE 2 Royal Institute of Technology of Berlin main façade



FIGURE 3 Cover sheet from one of the fascicles of the Städtebauliche Vorträge, belonging to the Eng. Roberto Bruno de Escobar

No longer after 1909, the school administration sent the engineer and professor João Lüderitz<sup>2</sup> in commission to Europe – visiting France, Belgium, Switzerland, Italy and Germany – and the United States of America to get to know the professional education institutes, hire masters to the workshops and acquire material to the facilities. Because it was an excellent education establishment, he had the opportunity of visiting the Royal Institute of Technology (Königlich Technische Hochschule) in Charlottenburg, an area of expansion located west of Berlin Figure 2 shows a rare picture - in the context of South America - from that school, published in the report by Lüderitz, when he came back to Porto Alegre.

According to McClelland<sup>3</sup>, as an institution dedicated to qualifying engineers and to contribute to technological development, the *Technische Hochschule* played a crucial role on the transformation process of Berlin in one of the biggest industrial cities of Europe. The Germanic school served as a model of technical education, which combined theory and practice. Professor João Lüderitz was amazed when visiting the institution facilities. In the present study, the focus in Berlin is due to the discovery that some engineers from Porto Alegre, such as Rodolpho Ahrons (1890-1894), Benno Hofmann (1911-1917), Roberto Bruno de Escobar (1913-1915) and Ernesto Woebcke (1921-1924) had studied at the *Technische Hochschule*, which is located there. Their registrations at that school were with the aid of the library from TU Berlin<sup>4</sup>. At this paper two of them will be particularly presented - they are Escobar and Hofmann.

Otherwise, the research shows that the instruction at the prestigious Germanic school was an important reference within the technical environment in Porto Alegre. In 1912 the contact between the Engineering School of Porto Alegre and both Europe and the USA became a lot more intense. Evidences of this are the frequent cases of professors sent on commissioned trips, or the professors hired abroad and the material bought, as well as the book collection and magazines purchased for the library. Not to mention that, starting from this year, the graduated students who stood out began to be sent to the educational establishments abroad to focus on their field of expertise. These pieces of information prove that the school was connected to the latest in the areas they were investing and performing at that time.

## THE TRACK OF THE IDEAS THROUGH THE PUBLICATIONS: ENGINEER ROBERTO BRUNO DE ESCOBAR'S CONTRIBUTION

Born in October 6<sup>th</sup>, 1889, in Porto Alegre, Escobar finished Junior High School in 1906 and entered the Engineering School the next year, graduating as a civil engineer in 1910. Even after graduated, Escobar still kept strongly bounded to the School, and lived within the influential technical environment. Due to that, perhaps, in 1912 he was invited to be part of the Improvement Commission. Escobar, likewise João Moreira Maciel, the Plan coordinator, was initially invited as a technical assistant to work on the commission<sup>5</sup>.

In december 1913, Escobar enrolled on *Technische Hochschule* in Berlin to specialize in electricity, where he stayed until the next year, when World War I was sparked, forcing him to return to Brazil. Nevertheless, the time spent at this school was enough to show interest in the matters regarding city building, which were on the debates guidelines, so he also started to study about city improvements. In his trip back he brought with him a collection of books and publications, including the main titles of reference for the study of Germanic Urbanism.

Escobar died by the middle of 1917 in Rio de Janeiro, because of a severe pulmonary infection – which was probably Spanish Influenza – according to the news published in the newspaper “A Lanterna” from the Federal Capital and replicated in the newspaper “A Federação” (The Federation)<sup>6</sup>, from Rio Grande do Sul. The year after, the library of the Engineering School of Porto Alegre would receive a donation of 145 books for its collection, all of them belonging to Escobar. According to the news on his death, the young engineer had already foreseen the fateful outcome of his illness two or three days before, leaving his personal library to the Engineering School of Rio Grande do Sul. The delivery of the collection was conducted by Escobar's father, Marçal Pereira de Escobar, Federal Deputy for PRR, according to a letter found by the present research in the School's report of 1918.

These books are among the ones we have available now and which motivated the study topic of this research: fascicles from the Conferences about City Building (*Städtebauliche Vorträge*), by Joseph Brix and Felix Genzmer, promoted at the *Technische Hochschule* in Berlin. On one of the fascicles' title page, we identify Escobar's name written in cursive script, dated from 1914 in Berlin, as we see on Figure 3:

It was important to the research to understand how the books had landed in Porto Alegre or who had brought the books and the fascicles about Germanic Urbanism to the Engineering School. At the beginning the question was: who was Bruno de Escobar? Now it's easier to understand: these fascicles were sold at the academic environment, therefore the young engineer seized the opportunity to buy them. In addition to those books, others were found in the rare collection from the Engineering School, like the work of Reinhard Baumeister, *Stadterweiterungen in technischer, baupolizeilicher und wirtschaftlicher Beziehung*, published in 1876, which became the first widely known Germanic urban treaty, and the work of Camillo Sitte *Derr Städtebau nach seinen künstlerischen Grundsätzen*, at its fourth edition published in 1909, which also belonged to Escobar (Figure 4). Both of them are considered rare exemplars. By the studies about Urbanism in Brazil. Most of the engineers in São Paulo or Rio de Janeiro had read Sitte in its French version, for instance.

How to explain Escobar's interest in acquiring these books? One possibility would be that because of the discussions about urban problems to be faced in Porto Alegre, the young engineer, as a member of The Plan Commission, may have had his attention aroused to the "urban" theme. Such must have been his interest, that he acquired the most important books and publications on the theme and attended some workshops during his short stay in Berlin. However, when looking into his brief history, one of the questions presented during this research is explained: the means through which these books, which were fundamental to the Germanic Urbanism, arrived at the Engineering school.

## THE TRACK OF THE IDEAS THROUGH EDUCATION: ENGINEER BENNO HOFMANN'S CONTRIBUTION

Benno Hofmann was born in October 10<sup>th</sup>, 1892 in São Leopoldo, the fortress of Germanic colonization in Rio Grande do Sul. In 1912 he started the Civil Engineering course at *Königliche Technische Hochschule zu Berlin*, which he finished in 1916. He was therefore a figure who had his entire education in Germanic environment, in a context where the "relatively new science" concerned about city building was profitably nurtured<sup>7</sup>.

Among the disciplines that were part of the syllabus during Hofmann's education, some related to the city building emerged, such as the ones taught exactly by his professors, Brix in disciplines as *Wasserversorgung der Städte* (Water supply in the cities) and Genzmer in disciplines as *Geschichtliches und Stadttypen (...) für Architekten und Bauingenieure* (Urban art, history and types of cities (...) for architects and civil engineers). While Brix<sup>8</sup> focused on technical issues related to the urban expansion project, Genzmer<sup>9</sup> brought aspects concerning the city landscape into debate. These contents come up on Benno Hofmann's speech when he demonstrates concern with both technical nature questions and esthetic issues of perception.

In 1917 and 1925, Benno Hofmann contributed with papers to EGATEA Journal – the acrostic from *Engenharia, Ginásial, Astronômico, Técnico, Eletrotécnico e Agronomia*, all courses that the Engineering School offered at that time -, the first technical journal of engineering produced in Rio Grande do Sul, which circled between 1914 and 1934. The first paper was written as soon as the engineer arrived in Porto Alegre, what demonstrates that he got immediately involved with the technical environment of the capital, specially the Engineering School and its engineers. At this paper entitled "General considerations on water, its properties and use for water supply in cities" thereby addressing the "general policy of modern hygiene" according to Souza<sup>10</sup>.

Hofmann's ideas reinforce the perception that the sanitation issues ruled the debates about city building at the beginning of the 20<sup>th</sup> century in Porto Alegre, as well as in the other Brazilian cities. The second paper published in 1925, covered in two parts, is entitled "Notes on street construction of cities". The text starts with a criticism about "some street layouts made in an unregulated and objectionable way".

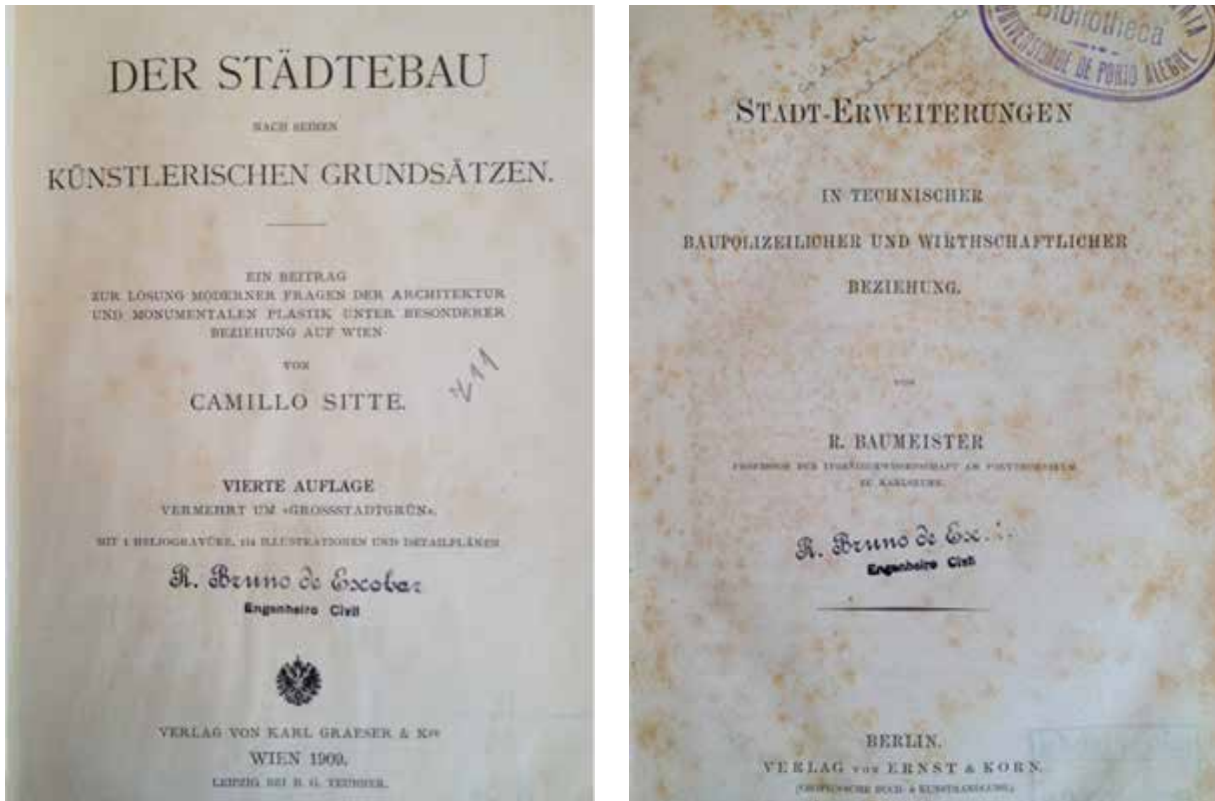


FIGURE 4 Reinhard Baumeister's and Camillo Sitte's books, belonging to the Eng. Roberto Bruno de Escobar

*They are gradually made, according to occasional demands, and they don't follow a right plan. There isn't a general project to the new neighborhoods, designed under the modern needs of science or cities construction art (Urbanisme, Town Planning).*<sup>11</sup>

Hofmann introduces the idea of general plan for a new neighborhood, therefore addressing the question about city expansion, which in his opinion should be done according to the modern urbanism thinking. The author rejects the non-observance of any method previously thought based only on opening new streets that neglects the land topography as well as any hygienic and health condition. His criticism also lies with the “absolute” straight and perpendicular layout, the mathematical equality and the mechanical act, which result on a neighborhood that “offers the aspect of a chessboard with a dull and distasteful consistency with no variation to break it, rest and delight our sight” (Hofmann, 1925, p. 1). Furthermore, the engineer points to the fact that this approach would be meeting the economical conveniences of the people to whom the lands made into streets belonged to. Hofmann's speech was, undoubtedly rooted on the modern urbanism elements.

*If we don't want to compromise our cities future, not only concerning it's ornamentation but also its salubrity; if we want to be proud of having a city with the requirements of a modern city, built according to the modern norms, it will be necessary to abandon this erroneous system and to adopt another one, the only true system, which dictated by the progressive evolution meets the demands of an easy circulation of vehicles, health, convenience and aesthetics requirements.*<sup>12</sup>

The engineer claims that this “relatively new science” still hadn't found local recognition and “up to now, as I'm aware of, we still don't have an Engineering School in Brazil that includes in its syllabus a discipline about this subject”. He also indicates that the European schools had already introduced this discipline in their programs. Hofmann's pioneer feature is found when he shows mastery of the vanguard urbanism and a concern about city building based on the European references.



FIGURE 5 Plan of Belo Horizonte, by Aarão Reis in 1894

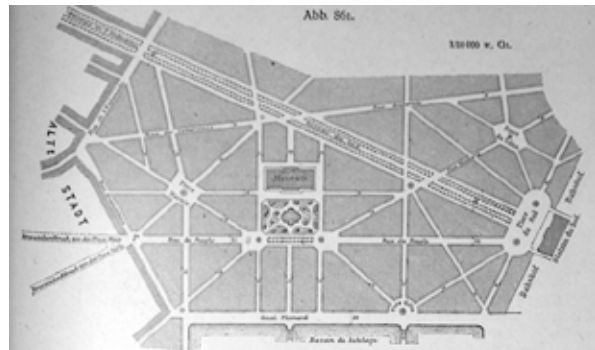
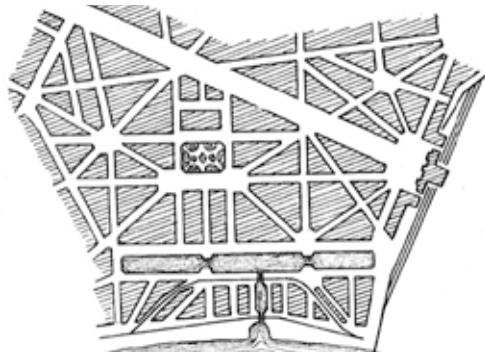


FIGURE 6 Diagonal layout in an extension of the city of Antwerpen according to Hofmann, on the left, and according to Stübben, on the right

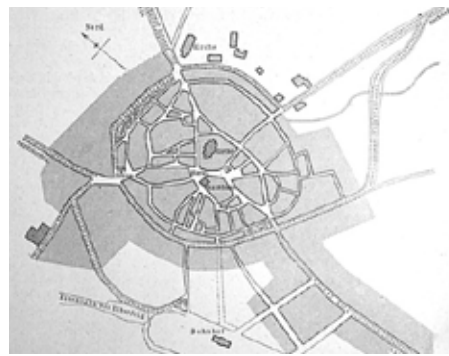
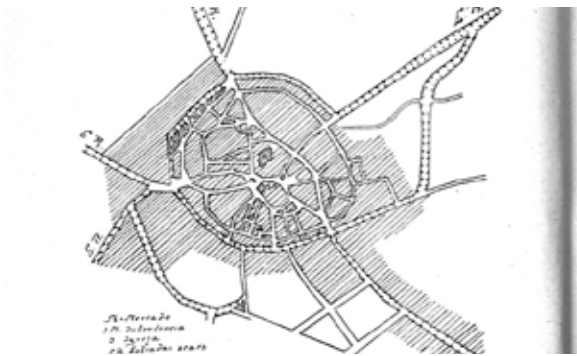


FIGURE 7 The medieval city of Lennep, according to Hofmann, on the left, and according to Stübben, on the right

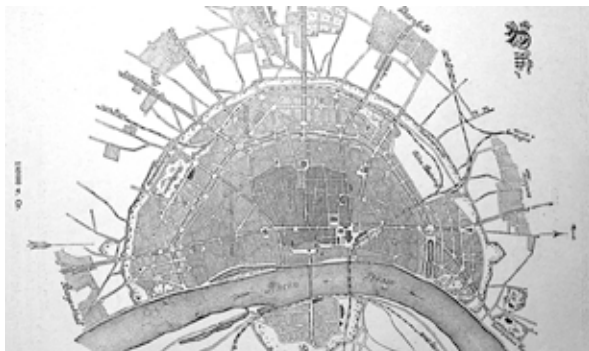


FIGURE 8 On the left an example of the outer circled street of Köln used by Hofmann, from Stübben's project on the right

Hofmann's paper presents an analysis of the city shape and addresses the use of models. In order to do so, he uses illustrations on which it became necessary to think about to better understand this figure's role on Porto Alegre's transfer of ideas. During this research we observed the similarity between the drawings used on Hofmann's paper and illustrations from other sources. From a textual and graphic comparative analysis, we could verify that Hofmann fundamentally used the concepts of layouts, streets and parks widespread by Stübben in his work *Der Städtebau*, first published in 1891. The comparative analysis was conducted through a copy from the third edition, published in 1924. In practice there wasn't the strictness on the citation of references. In spite of that, the reader is advised at the beginning of the paper about who the masters followed by Hofmann were (Sitte, Hénard, Stübben, etc...). It's hard to measure the influences suffered, however, the comparison between the discourses allows us to make an analysis between the local author and the ones with Germanic origin, through which is possible to prove that he is associated to Stübben's context. We could verify an extraordinary similarity between the discourses from both and therefore, from this analysis, we started to have evidence of the circulation of these ideas in the local environment.

The first Idea from which Hofmann makes use is concerning the highway system, which Stübben<sup>13</sup> treats in his book as 'streets network system'. Hofmann<sup>14</sup> changes only the order of presentation between the different kinds, but discusses through Stübben's speech the fundamental kinds of layouts for a city's arrangement of streets project: the rectangular type, the diagonal system and the radial system, calling the last one as a natural system once it refers to the natural development of a city, which happens from a central point like a church or the fairs park. In discussing the rectangular and diagonal layouts, Hofmann takes as example the Plan of Belo Horizonte, from the engineer Aarão Reis, 1894 (Figure 5). The new capital of Minas Gerais had been planned from the "clean state", with a checkered layout diagonally cut, inspired on Washignton's plan by L'Enfant. The plan received criticism, the most striking one was by Eng. Saturnino de Brito, who referred to the plan as "geometric lines".

However, according to Hofmann, "from the over application of diagonal streets there would be an extinction of rectangular blocks, which would be replaced by triangular ones. The author uses the example of the city of Antwerpen taken from *Der Städtebau*, according to the drawings comparison as reported by Figure 6. Stübben mentioned the example of *Quartier du Sud*, when addressing urban expansion.

As an example of the radial system, Hofmann uses the drawing of de city of Lennep, in Germany. The author reached the conclusion that the medieval city model would be the type used as a basis for the architectural plans of modern cities, as it would put together the advantages of the rectangular plan – preferably presenting rectangular blocks – and the advantages of the organic type, because of the radial and circular streets that would facilitate the traffic. Incidentally, the same street was used by Stübben to describe the layouts from the medieval cities, as evidenced on Figure 7.

Simões Júnior<sup>15</sup> points out some of the basic principles of the Germanic ideas, amongst which there was "the debate concerning the best layout for the streets, applied first and foremost in the urban expansion areas: if they should be straight or curved (*krumme oder gerade Straßen?*)". When talking about the streets, particularly the outer circled of an urban nucleus, Hofmann draws attention to the example of Köln, in Germany (Figure 8).

These are just some examples of the engineer Benno Hofmann's appropriation from the ideas spread by Stübben about city building. Among other things, Hofmann's discourse drew attention to the threaten to the future of our cities, concerning not only their ornamentation, but also its salubrity, circulation of vehicles, health, convenience and aesthetics requirements. According to Hofmann, his "sole main" with this paper was "to cooperate in benefit of our cities and populations". It's possible to say, from this example, that Hofmann's intention of cooperation was far beyond. Permeated by a deep influence, the engineer sowed in the fertile technical environment of that time the ideas of a new discipline, the urbanism, based on its Germanic slope.



## FINAL CONSIDERATIONS

The engineering school served as an open channel between Porto Alegre and Europe through which transitioned people and ideas, many of them coming from the Germanic environment. More accurately, a two-way path: there were professors going abroad in commissioned trips and students with opportunities of education and improvement; and there were masters and technicians from abroad hired to work at the school.

Through this channel, were brought here some of the most important vanguard works about city building - *der Städtebau* – published in Germany. One look at the library of the engineering school allowed us to identify in their collection books and publications about the Germanic urbanism. Therefore, the research shows the school as a guardian of a rare bibliographic collection, with books as the one by Reinhard Baumeister and Camillo Sitte, besides having kept for a long time the collection *Städtebauliche Vorträge*, organized by Joseph Brix and Felix Genzmer, holding also, among other discourses, the ones from Stübben.

The term *der Städtebau* wasn't used within the technical or academic environment in Porto Alegre. We could observe, however, that the ideas were present. Clearly, the actions related to city building were expressed in the words: “improvement”, “sanitation” and “hygiene”, which were part of the interventions roster from the modernization process of the Brazilian cities in this period.

The events of each trajectory can't be understood as isolated facts, if the intention is to think about the advent of a Germanic way of thinking through the Engineering School. One happened through the publications, while the other happened through the discourse published on the magazine from the institution. In spite of the misfortunes, Escobar's main contribution was to serve as a vehicle for the fascicles published on *Technische Hochschule* from Berlin to get to the school as a donation. The figure, however, who surely carries the Germanic ideas in his discourse is Hofmann, and through a comparative analysis it is possible to conclude that it is a transposition of ideas.

How to explain the fact that the propagation of these ideas didn't happen in a broad way and the resonances and continuities are not so explicit? Because of the harassment suffered by the Germans, mainly with the forthcoming World War II, many books in German were no longer read, were forgotten on the shelves or thrown away because nobody else spoke (or should speak) German. On the other side, in terms of lines of thoughts from Architecture and Urbanism, we can't forget that, soon after, Modernism would also suppress the manifestation of previous trends.

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# ASSIMILATION OF THE INDUSTRIAL VILLAGE CONCEPT BY JAPANESE BUSINESS CIRCLES AT THE TURN OF THE TWENTIETH CENTURY

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This article explores how the industrial village concept would have been regarded and discussed in Japanese business circles at the turn of the twentieth century. It reflects on how this concept was assimilated in Japan—through books collected by Japanese higher-education institutions, and the overseas travels of Japanese business people. Schools of Economics and Commerce compiled notable book collections on the subject of the industrial village, some of which were donated by business leaders. This indicates that the concept had been accepted in various contexts, and graduates of various business fields could have been aware of it. By conducting an analysis of Japanese overseas travellers experiences, we found that business travel increased rapidly in the 1890s, and by 1910, one-third of all overseas travel was business-related. This paper concludes by a) examining the remarkable case of the Nikkō Electric Copper Smelting Co. that consistently dispatched core administrators such as Tsunesaburō Suzuki and Tetsutarō Hasegawa to Western countries, and b) discussing the likely extent of their knowledge and understanding of the industrial village concepts they had observed and how they contemplated applying these concepts on their return to Japan.

## Keywords

Japan, industrial village, foreign books, housing, welfare facilities

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## INTRODUCTION

At the turn of the twentieth century, Western industrial magnates began developing model communities for their factory workers. These villages came to be called industrial villages. This article considers how Japanese business circles would have become aware of the Western industrial village concept, and how they would have incorporated it into their activities during the formative period of urban planning in this country.

Many studies have considered how planning ideas from other countries were transmitted to Japan.<sup>1</sup> Carola Hein<sup>2</sup> focused on the role of foreign and Japanese planning experts to describe the historical phases of their importation into Japan.<sup>3</sup> Hein also pointed out some fundamental features of modern Japanese planning, such as the role of bureaucrats. Sorensen discussed the importance of civil society, and described the planning developments that occurred during the ‘Taisho Democracy’ period.<sup>4</sup>

We take another approach, by examining the roles of entrepreneurs and business leaders in planning developments. Since modern planning methods had been developed in response to the process of industrialization, and industrialization was considered a key measure of Japan’s increasing national prestige, this approach merits attention. However, few studies have taken this approach.<sup>5</sup> In his early study on Magosaburō Ohara’s achievements at the Kurashiki Bouseki Co Ltd., Ishida pointed out the ‘immaturity’ of Japanese industrial villages as planning projects.<sup>6</sup> We assume that this is why it has not been thought possible to trace the obvious ‘transmission’ of the idea to Japanese industrial village projects. In addition, it has seemed difficult to comprehend the actions of diverse and fluid business circles, and contextualize each of their case studies,<sup>7</sup> especially in the formative phase of Japanese industrialization.

To portray the elusive notion of the industrial village concept in Japanese business circles, we introduce the alternative notion of ‘assimilation’, instead of ‘transmission’. The word assimilation connotes the gradual understanding of an idea, and its use for one’s own initiative, whereas the word transmission simply means passing an idea or piece of information from one person, place, or thing to another.

From known examples, we posit two main channels of assimilation. The first channel was the books describing industrial villages that were imported into Japan. The second channel was the direct experiences of Japanese business people who travelled overseas to Western industrialised countries.

The Shogunate and influential feudal clans of western Japan—such as Choshu and Satsuma—collected books on European scientific knowledge, and the Meiji government continued this practice. By the turn of the twentieth century, various types of higher-education institutions had been established to supply a pool of educated people to advance industrial development.<sup>8</sup> These institutions, where most business leaders in the private sector had been trained, acquired literature on the industrial villages. A known example of the introduction of the industrial village concept through the literature is that of Sanji Mutō (1867–1934) of Kanegafuchi Bōseki (Kanegafuchi Spinning) Co. He acquired relevant knowledge by studying foreign titles, which he asked Tokuzō Fukuda (1874–1930), a professor at the Tokyo College of Commerce (today’s Hitotsubashi University), to translate.<sup>9</sup>

Beginning in the mid-nineteenth century, students and officials were sent abroad for the purpose of importing advanced technologies and industrial policies. After returning home, their observations were reflected in technical innovations and industrial policies, and in this way they accelerated the industrial revolution in Japan. The private sector soon flourished, triggered by the privatisation of government-operated factories and mines under the *Kan-ei Kōjō Haraisage Gaisoku* (Regulation for Government Operated Factory Privatisation) of 1880. At this stage, business people in private companies were becoming interested in advanced theories and practices for the improvement of workers’ circumstances, particularly in relation to their housing conditions. They conducted research and inspections of European and American factories and industrial villages before Japan’s *Kōjō Hō* (Manufacturing Act) legislation was passed in 1911. This Act set the basic policy for the improvement of workers’ circumstances.

A known example of learning from direct experience is Teijirō Kurosawa (1875–1953) of Kurosawa & Co., who built a typewriter factory and workers’ houses at Kamata in 1918, following his stay in the United States, which began in 1891. He was in Chicago in 1894, and he may have visited and obtained information about Pullman Town. Yamaguchi described the Kamata factory workers’ village as follows: ‘it is assumed to be an industrial village built with an American idea, learnt though his stay in America.’<sup>10</sup>

This study first investigates higher-educational institutions’ historic collections of foreign books pertaining to Western industrial villages, in order to form an understanding of the basic circumstances required for the assimilation of knowledge.<sup>11</sup> We investigated foreign books that had been acquired by 1931, the end of the ‘Taisho Democracy’ period,<sup>12</sup> and examined them based on their titles and acquisition processes.

This study also reviews the entire picture of Japanese’ overseas business travel in the late nineteenth and early twentieth centuries, by analysing an existing compendium of detailed information about these travellers, examining fluctuations in the number of personnel involved, their areas of activity, and places of employment after their return to Japan. Finally, this paper examines the remarkable case of the Nikkō Electric Copper Smelting Co. (currently called Furukawa Electric Co. Nikkō Plant, hereafter Nikkō),<sup>13</sup> which consistently dispatched core administrators to Western countries for the purpose of observing business practices, in order to foster an understanding of these practices and how they could be applied when they returned to Japan.

## BOOK COLLECTIONS AND THEIR INFLUENCE

First, using Ci-Nii Books,<sup>14</sup> a search engine for Japanese higher-education institutions’ book collections, we targeted books with titles that used the specific phrases summarized in Table 1. Next, we examined every library that had a collection of the targeted books, and documented the years in which they had been acquired, and the process that had been followed to acquire the books. In addition, targeted books were written in major European languages (English, French, and German), and had been acquired by 1931.

With regard to the books written in English, older titles were those published from 1905 to 1906. *Model Factories and Villages: Ideal Conditions of Labour and Housing*, by Budgett Meakin (London: T. F. Unwin, 1905), which had been acquired by several Colleges of Commerce.<sup>15</sup> The Schools of Economics and Colleges of Commerce<sup>16</sup> had been major collectors of historical titles on the subject of industrial villages. It is notable that *Village Industries: A National Obligation*, by J. L. Green (London: The Rural World Publishing Co., 1915) was acquired by Schools of Agriculture.<sup>17</sup> *The Model Village and its Cottages: Bournville*, by W. Alexander Harvey (London: B.T. Batsford, 1906) was acquired by Tokyo Art School (today’s Tokyo University of the Art) in 1906, and *Houses for Workers* (Westminster: Technical Journals, ~1923) had been acquired by the School of Architecture, Kyoto Imperial University by 1921. These books contained images, plans, and drawings. We believe that they were selected for readers with specialized interests in design.

LANGUAGE PHRASES	
<b>English</b>	industrial village, model village, worker’s house ,worker’s village, company town, factory town
<b>French</b>	cite ouvriere, logement ouvriere, habitation ouvriere, cite industrielle
<b>German</b>	Arbeiterwohnhaus, Arbeiterwohnung, Arbeitersiedlung, Arbeiter-Kolonien
*Other phrases that made no hits in the search are omitted	

TABLE 1 Phrases targeted in book collection search

In the collections of books written in French, we found some remarkable features. First, the French books were older than those acquired in English. For example, *Cités ouvrières: des modifications à introduire dans l'architecture des villes*, by Charles Fourier (Paris: Librairie phalanstérienne, 1849), had been acquired by two schools.<sup>18</sup> A copy at the Osaka College of Commerce (today's Osaka City University) was originally purchased by Professor Tokuzō Fukuda of Tokyo College of Commerce in 1922.<sup>19</sup> Second, publications related to the Paris World Exposition of 1889 were found in many library collections. Three institutions<sup>20</sup> collected *État des habitations ouvrières à la fin du XIXe siècle: étude suivie du compte rendu des documents relatifs aux petits logements qui ont figuré l'Exposition universelle de 1889*, by Émile Cacheux (Paris: Baudry & Cie, 1891). Related titles such as *Les habitations ouvrières en tous pays* by Émile Muller and Émile Cacheux (Paris: Baudry & Cie, 2nd ed. 1889),<sup>21</sup> and basic reports from that period<sup>22</sup> were also acquired. This illustrates the far-reaching effects of the 1889 Paris World Exposition.<sup>23</sup> Kyoto Imperial University acquired a copy of a title by Cacheux dated 1924, as part of the Bücher Collection that had originally been assembled by Karl Bücher (1847–1930) at the University of Leipzig, after which the Koyata Iwasaki of Mitsubishi<sup>24</sup> purchased the collection, and donated it to the Kyoto Imperial University. A copy of the same title had been donated to the Kyusyu Imperial University in 1927 by Sadajirō (or Teijirō) Kuwayama, a steel manufacturer.<sup>25</sup>

With regard to German book collections, some titles were acquired that referred to workers' houses. The oldest title is *Die Arbeiter-Wohnhäuser in Ihrer Baulichen Anlage und Ausführung: Sowie die Anlage von Arbeiter-Kolonien* (Leipzig: Karl Scholtze, 1879) in the Bücher Collection of Kyoto Imperial University. *Das Arbeiter-Wohnhaus, Anlage, innere Einrichtung und künstlerische Ausgestaltung, Arbeiterkolonien und Gartenstädte*, by Karl Robert Weissbach and Walter Mackowsky (Berlin: E. Wasmuth, 1910), was the only German title in the school of architecture's collection. It had been acquired by the Kyoto College of Technology (today's Kyoto Institute of Technology) in 1911, and the Kyoto Imperial University in 1921. The School of Economics at the Tokyo Imperial University received a copy of *Die Berliner Arbeiter-Kolonie, ihre Entwicklung und Arbeit* by A. F. Schlunk (Berlin: Verlag der Berliner Arbeiter-Kolonie, 1903) that had been donated in 1921 by Gentarō Shimura, the president of Nippon Kangyo Bank.<sup>26</sup> A title that referenced Krupp's worker colonies, *Die Arbeiterkolonie Margarethenhof: die Schlafhäuser und das Speisehaus* (Essen: 1907), was acquired by Professor Yoshizō Sakanishi (1877–1942) of the Kobe College of Commerce. He also owned other titles that referenced Krupp's welfare facilities, and seems to have had a special interest in Krupp's practice. He also collected titles on *Gartenstadt*, and was interested in the relationship between industry and housing. Major collections were established by schools of economics and commerce, such as those at the Kyoto Imperial University, Tokyo Imperial University, Kobe College of Commerce, and Nagasaki College of Commerce (today's Nagasaki University), rather than by the schools of architecture and civil engineering. The most noteworthy point here is that some parts of these collections had been donated by entrepreneurs (Iwasaki) and business leaders (Kuwayama, Shimura). This suggests that the business sector initiated the adoption of ideas about industrial villages, and these book collections would have stimulated the next generation's business leaders to study these ideas.

## OVERSEAS EXCURSIONS BY JAPANESE BUSINESS TRAVELLERS

We reviewed all overseas travels by Japanese people from 1861 to 1912, the late Shogunate period to the Meiji period, by analysing an existing compendium of records that pertained to Japanese overseas travellers that had been edited by Akira Tezuka and others.<sup>27</sup> The main part of the compendium is a database that extracts travellers' personal information from historical documents such as *Kōbun-Roku*, *Dajō Ruiten*, *Tokō Jin-Meisai-Bo*,<sup>28</sup> with the addition of supplementary information from various biographical materials. The information compiled in this database pertains to 6,573 people. We analysed the database primarily to distinguish the historical movements of Japanese business travellers from those of other travellers. We focused on travellers who went to Europe and the United States, and from this group, selected individuals whose information included terms related to *Sangyō* (Industry), *Seiji* (Policy), *Keizai* (Economics), and *Eisei* (Hygiene). We then classified their fields of activity, their status while travelling, their destinations, travel dates, learning and training places, the schools from which they graduated, their hometowns, and the dates of their return.

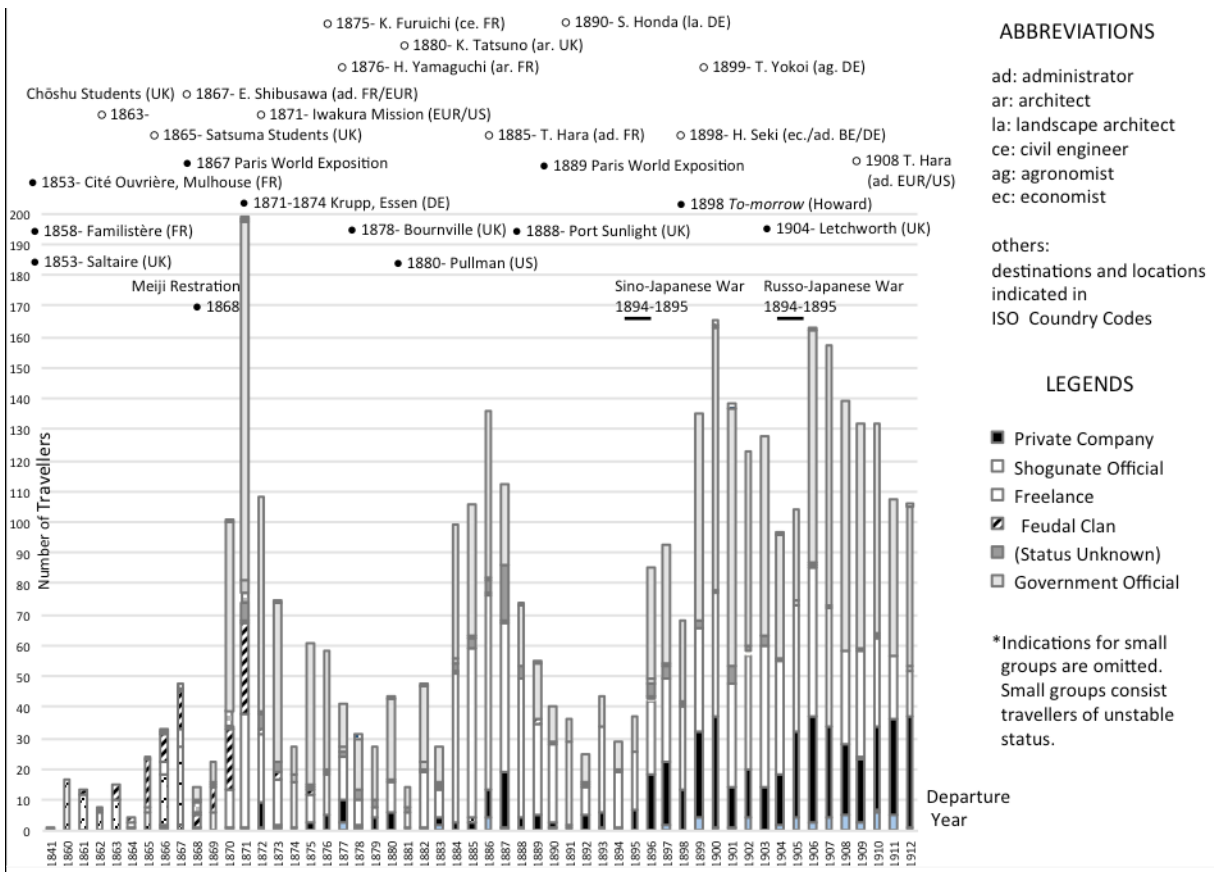


FIGURE 1 Fluctuations in the number of Japanese business travellers to Western countries relative to their employment status from 1841 to 1912.

Figure 1 depicts fluctuations in the numbers of travellers relative to their employment status (indicated as legends). We noted the years when well-known Western industrial villages’ developed, any related information, and personal individual information for several well-known administrators and important specialists (in the fields of architecture, civil engineering, hygiene, and landscape architecture) as historical benchmarks, such as their years of departure, names, specialties (abbreviated), and destination country.

The figure shows two peaks in the total number of travellers in 1871 and 1886, and this number increases steadily from 1896 to 1912. The peak in 1871 reflects travel to the Paris World Exposition of 1867, in which the Shogunate and feudal clans of Satsuma and Saga participated, and travel by the Iwakura Mission, which departed in 1871. The drop between the two peaks is due to the rebellion of 1877 (*Seinan Sensō*) and deflation in 1882. The peak in 1886 reflects the end of deflation, and the full-scale growth of private industry from 1885 through 1889, following the *Kan-ei Kōjō Haraisage Gaisoku* in 1880. The next decline reflects a financial crisis in 1890, and the outbreak of the Sino-Japanese War in 1894. Although the number of travellers decreased after the world financial crisis in 1900, the economic prosperity that followed the Sino-Japanese War and the Russo-Japanese War led to an increase in the number of travellers after 1896.

With regard to the employment status of travellers from 1865 to 1867, the number of travellers that belonged to the Shogunate and feudal clans increased, including travellers to the Paris World Exposition of 1867, and as part of the Iwakura Mission. Private travel increased from the late 1880s, and the number of travellers affiliated with private companies increased beginning in 1896, and thereafter accounted for a substantial proportion of the travellers. The number of travellers fluctuated at higher levels after 1899.

We then reviewed the compendium and recorded the travellers' workplaces after they returned to Japan, as a way of evaluating companies' travel commitments. The earliest cases of dispatching employees overseas occurred in the mining industry. The first was Sumitomo, which sent two people in 1876,<sup>29</sup> after which there was a twenty-year interval before they sent another traveller. Of the mining companies, Furukawa sent the largest number of travellers,<sup>30</sup> as we discuss in more detail later. After 1898, Furukawa, Mitsui, and Mitsubishi sent numerous personnel. The effort required to organise these trips illustrates these companies' sincere commitments to their development.

## ASSIMILATION OF THE INDUSTRIAL VILLAGE CONCEPT BY THE NIKKO ELECTRIC COPPER SMELTING CO.

Nikkō, a subsidiary of the Furukawa Mining Co., commenced operations in 1906, for the purpose of smelting products from both of its copper mines, Ashio and Kusakura.<sup>31</sup> The company repeatedly sent their core administrators (directors and managers) to Western countries from 1889 to 1945.<sup>32</sup> They were often sent abroad before they had been appointed to administrative posts. Furukawa Mining Co., the holding company, dispatched its first director, Kisaburō Yamaguchi, and then its second director, Suekichi Nakagawa. Tsunezaburō Suzuki, the third director, remained in the United States from 1904 to 1907, as a tutor for Toranosuke Furukawa,<sup>33</sup> who was studying at Columbia University. During his stay, Suzuki worked for an American railroad company, after which he studied accounting at Harvard University. In 1911, soon after his return to Japan, he made another trip to Europe and America, for the purpose of learning how factories were administered. After returning home, he was appointed the third director. In later years many directors travelled to Western countries, including Hideo Kajiyama (the fourth director), Juroku Kaku (the sixth), and Sakichi Kishino (the tenth).<sup>34</sup>

During Suzuki and Kajiyama's administrations between 1912 and 1915, a hospital and a kindergarten were established. During Keizō Nishimura<sup>35</sup> and Kishino's administrations between 1936 and 1948, the factory was designated a munitions factory, and some company houses were built to accommodate the growing number of factory workers and their families. Kishino's appointment also occurred after he returned from his travels.

Figure 2 shows the entire layout of the industrial village of Nikkō (above left), and the typical development clusters. Development progressed in each of the clusters in a way that was appropriate for its topographical features, and a cluster was equipped with facilities that included a Consumers' Cooperative Society kiosk, a public bathhouse, a kindergarten, a clinic, and an assembly hall. Tansei-Shataku (upper right) was a relatively spacious neighbourhood built in 1936 and 1937, intended for company engineers. Arasawa-Shataku (bottom), the largest cluster, was developed from 1940 to 1945, and accommodated 617 families in 1954. We can observe green belts or open spaces partitioning the area into six units.

We can assess the impacts travel had on the administrators' understanding of the Western industrial village concept through their writings. During his second tour, Suzuki visited Cadbury's model industrial village Bournville in the United Kingdom. After returning home, he wrote a book titled *Rōdō Mondai to Onjō-Shugi* (*Labor Problems and Paternalism*) in 1915.<sup>36</sup> Using the coined word 'Onjō-Shugi' (closely translated as paternalism), he described his travel to Bournville. 'I found that the British and German model factories all had a warm employer-employee relationship', Suzuki wrote, and that 'the famous chocolate magnate Mr. Cadbury<sup>37</sup> says that labour efficiency is in direct proportion to the warmth of the employer's heart'.<sup>38</sup> Four years later in 1919, Suzuki wrote again of his findings during that trip:

*Mr. Cadbury] said workers' houses, where workers recover from fatigue, should be as home-like as possible. In other words, they should not be like barracks, not like Nagaya (row houses). Sufficient space should be provided so as to allow them to grow plants and flowers.*<sup>39</sup>





FIGURE 2 Nikkō Electric Copper Smelting Co.'s Industrial Village, captured in an aerial photo in 1963.

The photographs in Figure 3 clearly show Nikkō Company houses, and how the village was laid out. Tansei-Shataku for engineers (left) had detached houses surrounded by individual hedges. Wanoshiro-Shataku, the village for plant workers (right), accommodated 258 families in semi-detached houses. We can observe that improvements had been made relative to barracks or the *Nagaya* type of housing. Here we need to confirm that Suzuki's implementation of an industrial village was the result of his first-hand experiences, and that the idea of developing such a community was reflected in subsequent developments in Nikkō.<sup>40</sup>

In 1903, a section manager named Tetsutarō Hasegawa travelled to the United States with Suzuki, and studied at the Massachusetts Institute of Technology and Yale University. He studied medicine and hygiene, and majored in metallurgy. After returning to Japan in 1908, he was employed by Furukawa, and worked with Suzuki at Nikkō during the same period. In his book titled *Kōjō to Shokuko (Factory and Workers)* published in 1915, Hasegawa explained his ideas on factory management. He also discussed workers' housing, and, furthermore, welfare systems, educational facilities, and hospitals, in a chapter titled *Shokkō no Fukuri Zōshin ni Kansuru Setubi (Facilities for Workers' Welfare Extension)*. Here he introduced Krupp's welfare facilities in Essen Germany, and Cadbury's Bournville, and provided photographs of these facilities.



FIGURE 3 The Nikkō company houses. Tansei-Shataku (left) and Wanoshiro-Shataku (right).

With regard to housing, Hasegawa wrote that, *When workers do not have the means to settle down in one place, they lack conscientiousness about their work and this impedes progress. As a result, the factory lacks skilled workers and expends its energy on the mass production of inferior goods. All factory owners must pay attention to prevent workers' dispersion and transfer. Therefore, housing is an essential topic of study for factory management.*<sup>41</sup>

Hasegawa then commented that, *In European countries, not only municipal authorities, associations and factory owners provide affordable and comfortable housing, but also national governments intervene in housing problems by taking down low quality houses, providing suitable new houses, and employing other effective means according to law and ordinances.*<sup>42</sup>

In addition, Hasegawa emphasised the importance of a consumers' cooperative society. 'With this [a cooperative society] workers are able to cultivate a sense of self-support and cooperation, and are able to learn how to balance saving and consumption.'<sup>43</sup> He went on to describe the Nikkō cooperative society in which Yamaguchi, the first director, ordered workers to organise, and subsequent directors paid special attention to the society and its facilities (Figure 4 left). Hasegawa also noted that education and training institutions are 'extremely important for factory progress', and again described the practices of setting up an apprenticeship system and a kindergarten at Nikkō, which, at Suzuki's initiative, he started to build in 1912 (Figure 4 right). In his descriptions of these welfare, education, and training institutions, Hasegawa again used Krupp as an example, with detailed references to the Krupp Education Association, Affiliated Sewing School and Housekeeping School, and especially the Krupp Consumers' Cooperative Society.<sup>44</sup>

Nikkō's practices were introduced to Japanese business circles in a book titled *Mohan Kōjō Nikkō Denki Seidōsho* (A Model Factory–Nikkō Electric Copper Smelting Co.), by Riemon Uno (Osaka: Kōgyō Kyōiku Kai, 1914), in which the author wrote, 'The factory pays close attention to the workers' housing'. Another article titled *Sankan no Den-en Toshi* (A Garden City Among the Mountains) on *Jiji Shinpō* (Tokyo: 1909)<sup>45</sup> reported that, 'the company is going to acquire land nearby the factory and is going to construct single-family houses with flower and vegetable allotments. In four or five years the company will let workers live there with no charge', and, the 'company set up kindergarten and night training schools for apprentices'.

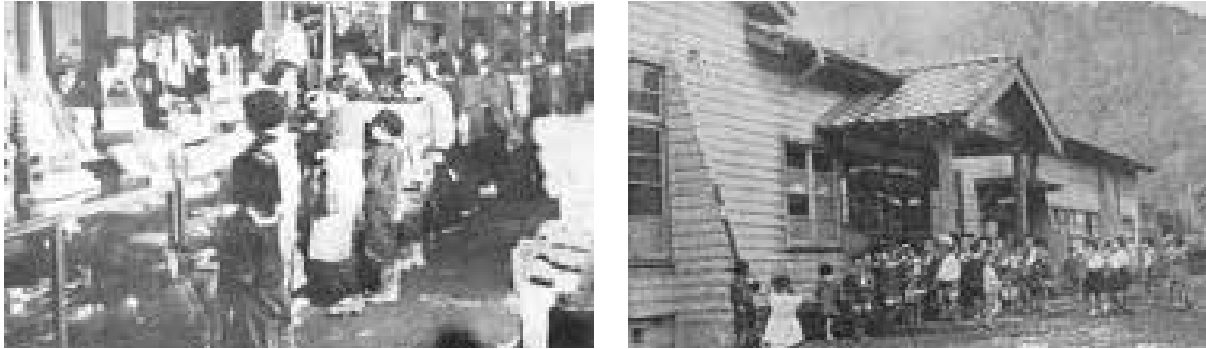


FIGURE 4 A Nikkō Consumers' Cooperative Society kiosk (left) and a Nikkō kindergarten at Hosō-o Shataku (left).

## CONCLUSION

This paper explored two means by which the concept of Western industrial villages was assimilated into Japan: the books collected by Japanese higher-education institutions, and the overseas travels of Japanese business people. Schools in various fields obtained titles related to industrial villages written in various languages. In particular, schools of economics acquired substantial collections on this topic, and, more importantly, some of these collections were donated by business leaders. This indicates that the idea of industrial villages, including the Garden City industrial village, could have been encountered in various contexts, and, through schooling, these ideas could have been passed to school graduates in various fields of business.

The extent of business travel undertaken increased rapidly in the 1890s, and by 1910, one-third of all overseas travel was for business purposes. These trips enabled Japanese businesses to be exposed to concepts and practical information regarding Western industrial villages first-hand. Companies had organised business travel, as was demonstrated by Nikkō's directors' overseas travels. By studying Tsunesaburō Suzuki and Tetsutarō Hasegawa's writings, we confirmed that they obtained an understanding of the industrial village concept through their first-hand experiences, and, to some extent, that knowledge was reflected in subsequent improvements to Nikkō's industrial village.

The connection to the West that developed through the importation of relevant books and business travel at the turn of the twentieth century, as described in this paper, indicates that business circles' exploration of Western industrial development laid an important foundation for the broader recognition and immediate application of Western planning ideas.

Further studies of the specific roles assumed by Japanese business people in planning development should be undertaken, and their importance in the international planning history should be argued collectively.<sup>46</sup> In this respect, studies on Japanese industrial villages are urgently needed to document the historical relationship between industrialisation and planning. For example, the Nikkō industrial village had been demolished by 2010, but the basis of its origin and the design practice it represented is a subject that requires further study.

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## Disclosure Statement

No potential conflict of interest was reported by the author.

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Hanna Okada received a Master of Engineering degree from Kagoshima University in 2016, having studied how understanding of the industrial village concept developed through overseas travels at the turn of the twentieth century.

## Endnotes

Shun-ichi Watanabe, the author of *The Birth of Urban Planning—Japan's Modern Urban Planning in International Comparison* (Tokyo: Kashiwa Shobo, 1993), pioneered this field of study.

Carola Hein, 'The Transformation of Planning Ideas in Japan and its Colonies', in *Urbanism: Imported or Exported?* ed. J. Nasr and M. Volait (Chichester: John Wiley & Sons, 2003). 51–82.

Using terms coined by Stephen Ward (2000), Hein describes historical periods and characteristic actions as 'generalized imitating and borrowing' from the West (1868–1919), and 'selective borrowing (1919–1945)'.

André Sorensen, 'Urban Planning and Civil Society in Japan: Japanese Urban Planning Development During "Taisho Democracy" Period', *Planning Perspectives* 16, no. 4 (2001): 383–406

Recently, a series of studies has been made using Riemon Uno's concept of workers' dwellings by Naoki Hirai et al. (2013). They mention Uno's recognition of Western industrial villages. Shigeo Nakano et al. (2014) studied the introduction of the 'neighborhood unit' concept into industrial development, though the major target is official planning by the public sector. There are also some classic case studies such as those described by Fujiya (2009), Ishida (1990), and Yamaguchi (1984), though these remain without sufficient contextualization. Katagi (2000) pointed out the historical importance of the industrial village in relation to the introduction of the Garden City concept to Japan, though he considered it difficult to find a competent Japanese industrial village as a counterpart to a foreign example.

Yorifusa Ishida, 'Japanese Industrial Village and a Reformist Factory Owner', *Planning Perspectives* 5, no. 3 (1990): 295–305.

With contributions from other authors (Kikata, Nakae), *Shataku Kenkyu-Kai* (2009) compiled case studies on the built environment in industrial villages in Japan, though the meaning of planning practices in an international context has not been addressed.

For a historical outline of Japan's higher-education system, see Motohisa Kaneko, 'Japanese Higher Education: Contemporary Reform And The Influence Of Tradition', in *Asian Universities: Historical Perspectives and Contemporary Challenges*, eds. Paul G. Altbach and Toru Umakoshi (Baltimore: Johns Hopkins University Press, 2004).

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Hiroshi Yamaguchi, 'Kamata no Warera ga Mura-Kurosawa Sadajirō no Kōjō Mura' [Our Town in Kamata, an Industrial Village Built by Sadajirō Kurosawa], in *Kōgai Jutakuchi no Keifu*, ed. H. Yamaguchi (Tokyo: Kajima Shuppankai, 1984), 110–18.

Yokokawa and Nakae (2015) have demonstrated the effectiveness of this methodology on Garden City ideas.

In 1931 the Manchurian Incident occurred, after which the democratic government came to an end, and military dominance increased. This year is commonly referred to as the end of the Taisho Democracy Period. Sorensen op. cit., and Yorifusa Ishida, *Nihon Kindai Toshi Keikaku no Hyakunen* (Tokyo: Jichitai kenkyu-sha, 1987).

Okada, Kikata, and Koyama (2016) have produced an outline of the background of the Nikkō industrial village development.

<http://ci.nii.ac.jp/books/> (hosted by the National Institute of Informatics).

Acquired by the School of Law, Kyoto Imperial University in 1906, the Kobe College of Commerce (Kobe University) in 1906, and the Oita College of Commerce (Oita University) in 1926.

In this section, a 'School' is equivalent to a 'Bunka-daigaku' or 'Gakubu' of Imperial Universities, and a 'College' is equivalent to an independent 'Kōtō Senmon Gakkō' (literally translated as higher specialized school).

Acquired by the School of Agriculture, Tokyo Imperial University in 1915, the School of Agriculture, Tohoku Imperial University in 1915, and the Kagoshima College of Agriculture and Forestry (Kagoshima University) in 1915. Three other institutions acquired it by 1917.

These are the Osaka College of Commerce and Kyushu Imperial University.

The Fukuda Collection at Osaka City University includes Tokuzō Fukuda's own collection, and part of the collection of his mentor, Lujo Brentano (1844–1931), from the University of Munich.

These are the Kyoto Imperial University, the Osaka College of Commerce, and Kyushu Imperial University.

Acquired by the School of Economics, Kyoto Imperial University, in 1928 and 1932. An earlier acquisition is assumed to have been donated by Hideshirō Murakami.

*Le logement de l'ouvrier et du pauvre* by Arthur Raffalovich (Paris: Guillaumin, 1887) was acquired by the School of Economics, Kyoto Imperial University in 1924, the Tokyo College of Commerce in 1931, the School of Economics, Tokyo Imperial University in 1924; *Le logement de l'ouvrier et du pauvre en Belgique* by Louis Bertrand (Bruxelles: Chez l'Auteur, Paris: à la Revue Socialiste, 1887) was acquired by the School of Economics, Kyoto Imperial University, in 1924

For the impacts of international exhibitions, see Helen Meller, 'Philanthropy and Public Enterprise: International Exhibitions and the Modern Town Planning Movement, 1889–1913', *Planning Perspectives* 10, no. 3 (1995): 295–310.

Koyata Iwasaki (1879–1945) was the fourth president of Mitsubishi company group.

A person named Sadajirō Kuwayama was appointed the first director of Nippon Steel Co. Hirohata Works in 1937. We assume that he donated the historical collection at Kyushu Imperial University.

Gentarō Shimura (1867–1930) graduated from the School of Law, Tokyo Imperial University. He first worked for the Ministry of Agriculture and Commerce, then turned to the private sector, and was finally appointed as the president of Nippon Kangyo Bank in 1911.

Akira Tezuka, Toshio Ishijima, 'Bakumatsu-Meiji Kaigai Tokōsha Junbutu Jōhō Jiten' [Compendium of the Overseas Travellers in the Last Days of Tokugawa-Shogunate and Meiji Era] (Tokyo: Genshō sha, 2003).

These have been kept by the National Archives of Japan.

Sumitomo sent Kadosuke Shiono (1853–1933) and Yoshizō Masuda (1850–?) to France in 1876. Shiono studied at Ecolé des Mines de Saint Étienne, and later became the director of Sumitomo Bessi Copper Mine.

Tezuka et al. op. cit. and Furukawa Mining Co., *Sōgyō Hyakunen Shi* [Centennial History of Enterprise] (Tokyo: Furukawa Mining Co., 1976).

Furukawa Electric Industry Co., *Sōgyō Hyakunen Shi* [Centennial History of Enterprise] (Tokyo: Furukawa Electric Industry Co., 1991).

Furukawa Electric Industry Co., Nikkō Electric Copper Smelting Co., *Seidō-sho Gōju-nen* [Fifty Years of Copper Smelting Co.] (Tokyo: Furukawa Electric Industry Co., 1954).

He is the son of the founder Ichibei Furukawa, and the third president of Furukawa in later years.

Furukawa Electric Industry Co., Nikkō Electric Copper Smelting Co., op. cit.

Details of Nishimura's travel experiences are unknown, however, it is said that he travelled abroad seven times, and every time he returned home he became involved in setting up and maintaining new facilities. Ibid. 44.

Tsunesaburō Suzuki, *Rōdō Mondai to Onjō-Shugi* [Labour Problems and Paternalism] (Tokyo: Yōriki-sha, 1915).

In addition to Suzuki's writings here, several articles compiled in the appendix of Suzuki's 1915 publication reported that Suzuki had had a direct conversation with 'Mr. Cadbury'. We assume that Suzuki met George Cadbury (1839–1922), since Suzuki's visit was in 1911.

Suzuki op. cit. 3. The original text was written in Japanese; it has been translated for this paper.

Tsunesaburō Suzuki, *Kōjō Kanri Jitsugaku* (Tokyo: Daiyamondo Sha, 1919), 259–261. The original text was written in Japanese; it has been translated for this paper.

From an economic historian's point of view, William Tsutsui, who discussed the introduction of scientific management to Japan, argues that Suzuki's 'Onjō-Shugi' indicates that the paternalistic characteristic typical of Japanese is a rhetorical device, even compatible with scientific management. Beyond that, Tsutsui notes that Nikkō and Bournville are much alike in the blending of paternalism and scientific management. Nevertheless, it is unclear if Suzuki was aware of it. Tsutsui (1998), 51–56. Teppei Doi shares basic recognition of Suzuki's concept, though he emphasises Suzuki's full comprehension of the Western management concept, and adjusts its use to Japanese labour circumstances. Doi (2004).

Tetsutarō Hasegawa, *Kōjō to Shokukō* [Factory and Workers] (Tokyo, 1915), 74. The original text was written in Japanese; it has been translated for this paper.

Ibid. 76.

Ibid. 270.

Ibid. 363–364.

A serial running report in the newspaper, reported on 8 May through 11 May 1909.

In order to set up an academic platform for international comparative studies on labour history that considers the idea of paternalism, Kazue Enoki (2009) reviews previous studies on Japanese labour-management history. Enoki argued for the conceptual variety of *Onjō-Shugi*, from the religious (Christian)-based practices of Ohara, Mutō, and Tsurukichi Hatano of Gunze Spinning Co. to counter Suzuki's scientific approach. Also, he proposes that the *Kyōchō-Shugi* [literally translated as 'cooperativism'] of the Kei-ichiro Yasukawa of the Meiji Mining Co. and the Yasukawa Electric Co. should be considered a form of paternalism. In conclusion, he observed that demonstrable studies of the history of Japanese paternalism in a global context had only just begun. The same observation can be made of related studies on planning history.

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## Image Sources

Figure 1: Produced by Hanna Okada under the instruction of Junne Kikata. 2016.

Figure 2: The Geospatial Information Authority of Japan (GSI), Digital Archive [KT632YZ 1963]. Notes and icons added by the author.

Figure 3: Furukawa Electric Industry Co. Nikkō Electric Copper Smelting Plant, Seidōshō Goju-nen, Tokyo: Furukawa Electric Industry Co. Nikkō Electric Smelting Plant, 1954. 105. 107.

Figure 4: (left) Hasegawa, Tetsutarō. *Kōjō to Shokukō*, Tokyo: Shuei-sha, 1915. 345. (right) Uno, Riemon. *Mohan Kōjō Nikkō Denki*, Tokyo, Kōgyō Kyōiku Kai, 1914. 123.

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# THE ENGINEERING KNOWLEDGE CIRCULATION IN BRAZIL: THE CONNECTION BETWEEN RIO DE JANEIRO AND AMAZON IN THE TWENTY FIRST CENTURY

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This paper discusses the ideas and knowledge circulation and its exchange between two social actors who engaged themselves in reflections, plans, decisions making and executions in the urban field in the nineteenth century, especially in Belém and Rio de Janeiro, Brazil. These are the actions of Henrique de Beaufort-Rohan (1812-1894), a military engineer who was an important figure at the 19th century second half in Brazil and became the president of the Province of Pará in 1856, and also José Coelho da Gama Abreu (1832-1906) who, in 1855, with 23-year-old and already graduated in Law and Mathematics in the University of Coimbra (1849-1853), became the Director of the Public Works Department in that same province. The intent here is to understand the flow of ideas and the knowledge exchange between these two social actors in Brazil in the late 19th century and its relevance to the planning history.

A thorough research about each of these characters' biography was carried out. Official documents, periodicals, journals, reports and publications written by them were analyzed. A chronology of both figures was made from the possession of these data. This chronology was crossed with another one, made up from the Brazilian urban history data during that period, particularly in Belém and Rio de Janeiro. This research methodology made possible the understanding of these two social actors importance for the planning history.

This research made clear Rohan's great contribution for the urban planning in Belém, especially when a deep investigation was made of his cultural and intellectual formation and how he passed on this knowledge. At that time, Gama Abreu and Beaufort-Rohan became close. There are several reports that indicate the intense experiences that both had together, as well as official government reports of numerous correspondences exchange between them on work conditions concerning decision that both had to make so far concerning the Public Works Office.

Rohan in his reports to the central government emphasized the engineers' capacity and competence. As it turns out, a year after taking office, Gama Abreu was already mentioned as an engineer and his qualities exalted to the imperial government.

A constellation of ideas coming out of paper can be seen on the chronology nebula that is Abreu's term ahead of the Public Works Office direction. Some of these ideas have been only proposed, but others have got to the stage of design or even executed. Some of them finished, others paralyzed or interrupted by political conflicts or lack of resources. It is evident the importance of the knowledge absorbed by Abreu from Henrique de Beaufort-Rohan, especially by observing a shift in his actions and self-confidence after that contact. This all contributed to the planning history in Belém and in Brazil, especially since the importance of these two social actors in defining the image of Belém and Rio de Janeiro. A fact that worth mentioning is that a lot of Abreu's action configures Belém urban image on the present days.

## **Keywords**

Urban Planning, Knowledge circulation, Belém, Rio de Janeiro, Gama Abreu, Beaufort-Rohan





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# BETWEEN THE INSURGENCY AND THE WALLS: THE PRODUCTION CONDOMINIUM CLUB IN SÃO PAULO IN THE 21ST CENTURY

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The objective of this work is to understand the influence of legislation and public policies in joint action with the real estate market, contributing to the rise of condominium club and, from there, to check the model remaining of recovery of public space by insurgent groups. We analyzed the changes in the city as opposed to occurring in municipal, state and federal urban legislation, with the focus on the production of the condominium clubs regarding the period of the real estate boom between 2004 and 2014. We could note that the production is characterized by the increased in the lot area, in the number of towers and leisure items, and also by the expanding of the area of operation of the real state market, resulting in the inclusion of new areas in the formal real estate dynamics. Through the analysis of the district of Vila Andrade, this article argues that the Condominium Club can be understood as an urban typology, in the sense that their spatial configurations in the local context have induced new territorial dynamics, guided by the spatial segregation and social exclusion. We argue that it has contributed to the reduction of open spaces offered by the municipality.

**Keywords**

condominium clubs, urban sprawl, metropolization, real estate market, formal periphery.

## INTRODUCTION

The vertical residential condominium's model with numerous leisure areas in the common spaces of the buildings, which we call "condominium clubs" was researched. The model was produced and disseminated in the second half of the 2000s during the real estate boom that took the Sao Paulo metropolis. Between 2004 and 2014 the number of housing units produced in São Paulo increased by 58%. If we consider the Greater São Paulo, in the same period the increase was 108.606% (Data discussed by the author according to EMBRAESP database.). The projects are characterized by having two or more apartment towers, ample leisure areas in common spaces of the buildings, large walled perimeters forming islands highlighted from the urban environment. Configured private spaces, exclusive, protected by safety barriers (walls, electric fences, 24-hour guardhouses, private security, etc.). Inhibiting the use of the sidewalks by people passing through the neighborhood, increasing the sense of insecurity on the street, and prevents its function as a place of encounter, of coexistence, of exchange, of the multiple uses that occur in the daily relationship with the city of work, transport and leisure.

The condominium clubs proposes a new dynamic to the spaces, causing segregation. It has started to become an object of desire and consumption for all social classes, corresponding to a supposed "new way of living," legitimized by the feeling of fear and insecurity of the city's residents. In contrast to the intramural life proposed by condominiums, there are new forms of appropriation of public space organized by groups tacitly, horizontally, non-partisan and independent of governments, called urban collectives, or insurgencies, seeking to bring back the the sense of community, the heterogeneities and reframe the public space. The objective of this work is to know the influence of legislation and public policies in joint action with the real estate market, contributing to the rise of condominiums club and perform an analysis of territorial dynamics in the District of Vila Andrade produced by condominiums.

## CONDOMINIUM OF THE 21ST CENTURY: A STEP BEYOND THE HORIZONTAL MODEL

Condominium club is a vertical residential model with extensive leisure areas program in the common spaces of the buildings. The model has two or more apartment towers above 2,500m<sup>2</sup> land, protected by walls, security cameras, 24-hour guardhouse, private security and service. The leisure facilities consist of a party room, playgrounds, adult and children's swimming pool, gourmet space, zen space, pet space, private green space, etc.

The open spaces of the common areas between the towers of the projects, such as squares, boulevards, characteristic of public spaces of the city, are recreated as "ideal", within the private condominium space. In these spaces, the residents share the management of the common use areas and develop cohabitation activities similar to those found in the public space of the city. However, these social relationships are between equals, once its residents have the same level of income and social position. This dynamic reflects a homogenization of spaces for collective use, distinct to the public space, where coexistence is between all kinds of people.

Another characteristic is the occupation of large lots, which 2,500m<sup>2</sup> to 40,000 m<sup>2</sup> as in the case of the building DOMO HOME in São Bernardo do Campo, reaching 74,000 m<sup>2</sup> and the building GREEN TAMBORÉ in Santana de Parnaíba, resulting in large walled perimeters segregated from the city space, creating real "walled islands", which inhibit the use of sidewalks, increasing the feeling of insecurity among pedestrians. Despite the negative impact on public space and its urban segregation, the publicity and real estate marketing continue to make the condominium clubs an object of desire and aspiration of a "new way of living."



FIGURE 1 Condomínio Dome Home in Sao Bernardo do Campo Sao Paulo. Leisure facilities: Autorama Room and Games, Hall of Adult and Children parties, Children's and youth Playground, Movies, Study Room, Garage Band, Lan House and Games, Dog Walk. Picnic, orchid garden, Space Gourmet, Art studio, woman space with Ultimate massage room, BBQ and pizza Oven, Recreational Court, Tennis Court, Walking Track, Exercise Equipments, pergola with hammock , Teen Area, Adult and children s swimming Pool , Biribol, Island, Solarium, Tropical Bar, Heated Swimming Pool, Relaxation Spa, Dry and wet sauna with Shower, Fitness Room. Housing unities ( HUs): 784, 7 towers. Land: 40,371 m<sup>2</sup>.

The typology of the condominium clubs is situated inside of the urban perimeter, different from the horizontal condominiums that are located in remote and rural areas. According to Caldeira<sup>1</sup>, the horizontal condominium model, called “fortified enclaves” by the author, appeared in the outskirts of Brazilian cities in the 1970s to house the upper and middle classes. These condominiums, according to Freitas<sup>2</sup>, have characteristics such as large tracts of walled land with watchtowers and security cameras, located in areas far from urban centers. Both models show, the aseptic streets and sidewalks, homogeneity of its inhabitants by income, social class, taste, culture, etc. They are meant for the middle and upper classes, as a symbol of prestige, exclusivity and social status.

According to Freitas<sup>3</sup>, this model is based on the housing model of American and English suburbs. Originally designed as weekend residences intended for rest and recreation of wealthy families who wanted to get away from downtown to move away from workers considered undesirable and “dangerous “. According to D’Ottaviano<sup>4</sup>, this is the closed subdivision model that appears in Brazil, and had as reference the American suburb, based on transport by car and peripheral expansion of large cities.

The condominium model built in Brazil, derived, according to Caldeira<sup>5</sup>, from two different urban points of view: the garden city and the modernism. The garden city model proposed the creation of small towns, self-sufficient, where industry workers would live in contact with nature, in a collective ownership of land, and establish social relations cooperatively. The proposal established cities of circular shape, surrounded by a green belt that restricted their growth and would be linked to other small towns. Economic, residential and administrative activities would be separated by green areas. In the center would be organized public buildings, which would create the “civic” spirit.



FIGURE 2 Le Corbusier: Unité d' Habitation (1946) Marseille.

The local public authority would control the city and the people, to prevent speculation and avoid irrationality in their use, in turn, would control this. With some modifications of the garden city model, condominium clubs has walls, absence of integration with its surroundings and with the spaces of the city, contrary to the ideals of the garden city community life.

With the influence of modernism, we can highlight the Radiuse model city of Le Corbusier. The proposal consists of mono-functional compartmentalization of city functions: work, housing, recreation, transportation, administration and civic. It distributes these functions linearly along a main axis of movement, allowing the growth of each sector to its sides and consequently the expansion of the city.

Le Corbusier proposed the building of the Marseille housing unit. The verticalization allows the land returne to its natural social function. The residential units dating back to Phalanstery: an architecture focused in the happiness for community enjoyment. The program involves: interior streets, gym, bar, restaurant, children's room, health center, kindergarten, club, lavatory, meeting room, laundry, entrance gate with a guardhouse and garage. It means the new "way of living" in the modern city. The design is an integral part of the housing, which is an integral part of the neighborhood and the city. It is a housing unit that aims to relate the scales. The villa is part of a productive gear. Architecture and urban planning were together as unit. In this building typological variation, the planning solution and management are important.

The condominium clubs reproduces the services and Lifestyle on the program of the Marseille building housing units, increasing the number of leisure areas, but does not reproduce the idea of scale (residential unit, district, city) on the other hand, it reduces the city scale into a lot scale, privatizing public services such as security. Excessive verticalization is not used to allow the land its natural social function, but rather to increase the real

estate profit. The condominium leisure program is not intended to develop the happiness of community life, but rather proposes a new happiness in a “way of living”, segregated from “inconvenient and unwanted people”. It proposes happiness in coexistence among equals.

In condominium clubs, the modern architecture becomes a status symbol. There are some methods originating from modernist planning to move people away from urban centers, producing inequality, streets designed for vehicular traffic, absence of sidewalks, buildings facing the interior without interacting with the street arranged in a non-linear manner, separated by large green areas, sculptural buildings and wealthy residential areas, create and maintain social separation in the city.

## THE REAL ESTATE BOOM IN METROPOLITAN SÃO PAULO

According to Fix<sup>6</sup>, the so-called “real estate boom” which occurred during the 2000-2005 period, and was due to a combination of three factors:

- 1 The increase in income and the reduction of economic inequality, from the policies implemented in the Lula government (2003-2010), including the valuation of hand labor base and the growth of the formal labor market, the actively employed population increased by 9% from 2003 to 2010, and registered workers increased by 18% in the same period. These measures gave more security to workers and created the conditions for demand for housing.
- 2 Review of the real estate legal framework, with the introduction of project-related assets and liens. The Law 9.514 of 1997 was amended by Provisional Measure 2.223 2001 and by the Law 10.931 of 2004 establishing the liens to real estate, an instrument that allows greater legal certainty to financial institutions. It consists the sale under retention of title, which means, the seller retains ownership of its name until it is fully repaid by the buyer without mortgage, which makes the judicial process much longer. In fiduciary alienation, the process in case of default runs extrajudicial, making it more agile. This type of legal change, encouraged financial institutions to make financing available to sectors previously not met, such as the middle-income and lower classes, according to Meyer<sup>7</sup>.
- 3 The growth of housing credit, with the gradual easing of financing parameters. Between 1983 and 2005, the SBPE (Brazilian System of Savings and Loan) annually financed 56.949 units on average. In 2002, the Lula government forced the banks to gradually resume housing finance with proceeds from passbook savings until they got the application requirement of at least 65% of funds in this type of credit. In 2007, the expansion of funding due to competition between banks forced them to extend the period of financing and to lower interest rates, reducing the value of the services and expanding access to credit of the middle class. The developers started to offer financing to lower income segments<sup>8</sup>.

Between the second half of 2005 and the first half of 2007, the amount that the real estate sector companies reached by market capitalization, led them to produce large projects such as condominium clubs as a way to convince investors that it would be possible to get general Sales Value promised in stock offerings. Consequently, it was necessary to create a large stock of land available outside the areas of operation of the traditional elite neighborhoods where these grounds were scarce. As a result, competition for land between real estate companies generated an increase in land price, motivating the search for land in remote areas away from the urban centers, such as the suburbs or rural areas of the city or in other municipalities and states.

The number of housing units (HUs) launched in greater São Paulo had a progressive increase from 2005, in the capital as in some other cities. During this period the annual average of HUs launched was 55.710. It represented almost double that of the previous six years, which were released on an annual average 32.419 Hus. In 2010, only 70.781 HUs were launched<sup>9</sup>.

In the period between 2007 and 2014, it is observed that the number of HUs launched in São Paulo, obtained an annual average of 31.7%, which represents a slowdown compared with the greater São Paulos, which obtained in the same period an average annual 53,000 HUs released. This is due to the advancement of the housing market in the fierce struggle for lots in neighboring towns to the city of São Paulo. The territorial expansion of the formal housing market also occurred within the municipal area of São Paulo. Districts that from 1998 to 2004 had a reduced number of housing units releases, spent the next period to focus a significant production of HUs launched between 2005 and 2014. This territorial dynamics of the real estate industry is due to the areas of traditional elite neighborhoods, land is scarce and real estate companies to provide security to investors feel forced to seek large grounds that are found in old industrial districts and peripherals from the city.

DISTRITOS	UHS 1998 A 2004	UHS 2005 A 2014
Vila Andrade	7.552	16.899
Santo Amaro	3.569	10.230
Vila Mariana	5.997	8.376
Sacoma	3.851	9.505
Campo Grande	3.574	8.655
Campo Belo	2.701	8.200
Saúde	5.432	7.098
Tatuapé	6.380	8.707
Mooca	3.870	6.706
Vila Prudente	2.498	6.879
Itaim Bibi	8.800	13.831
Barra Funda	493	9.340
Vila Sônia	3.959	7.371
Lapa	3.172	7.158

FIGURE 3 Districts with marked concentration of HUs launched between 2007 and 2014

## THE INDUSTRIAL PRODUCTION OF THE DISPERSION PROCESS IN THE CITY OF SÃO PAULO

The land availability in old industrial districts is due to the process of urban sprawl of industrial production that began between the decades of 1945 and 1950. According to Reis<sup>10</sup>, this dispersion occurs in two stages: the first, between the 40 and 70 decades, when the factories were located in the old industrial neighborhoods, along the railroads. They were established in the suburbs around the city, in municipalities that further joint the Greater São Paulo.

The second step is the construction of highways from 1947, some industries began to abandon the old industrial districts and moved next to highways, close to new metropolitan areas in training such Campinas and Vale do Paraíba and Baixada Santista, starting new metropolitan areas. In the 1960s, large industrial and technological poles are formed in remote areas. Between 1970s and 2005, the industries start to occupy more distant areas, such as the neighboring municipalities of the Greater São Paulo, Guarulhos, Osasco and ABC.

The factory displacement from the central districts led to the emptying of industrial districts like Bras, Mooca, Ipiranga and Lapa. From the second half of the 2000s, the land that housed the old factories began to be occupied by condominium clubs. Residential condominiums are established outside metropolitan areas, but also trade and service sectors, from the second half of the twentieth century assumed similar organization to the industry and moved outside the city especially near the highway.

This business concentration, according to Indovina<sup>11</sup>, favors the dispersion, increasing the vehicular dependence and roads for access them. It creates a diffuse and low-density city, keeping up with the industry dispersion and residential areas to serve the middle and upper class consumer market.

## VILA ANDRADE DISTRICT: AN ANALYSIS OF NEW SPATIAL DYNAMICS

Chosen as a case of study the district of Vila Andrade is located in the south of São Paulo, near to the Pinheiros River. The choice is justified as the largest district concentration of enterprises in the studied period. By early 2015, it reached 18.643 residential units. This district drew the attention of many construction companies in the real estate market by the empty lands availability, already scarce in Morumbi (district with which it borders), and for its location, infrastructure and low land prices. The Vila Andrade had 7,552 residential units launched between 1998-2004 and 16,899 housing units launched between 2005 and 2014 representing an increase of 123.77% in 9 years.

The major Vila Andrade growth happened in the late 1970s and was consolidated in the 1980s, looming in 1990. According to Gonçalves<sup>12</sup>, in the 1940s, the Pinheiros River was rectified and the lowland drained, which enabled the arrival of upper classes enterprises to the neighborhood, which had occupied the city in the southwest direction, starting from the noble neighborhoods of the central areas such as Campos Eliseos, Santa Cecilia, Pacaembu, Jardim America, Jardim Europa and Jardim Paulistano. The Lowland River Pinheiros and Morumbi region were composed of large farms whose owners reserved land seeking the land recovery until the 1990s, when the region began to be built.

While concentrating noble enterprises, the district has little urban infrastructure. According to Folha de São Paulo report of March 13, 2011, there are 571 clandestine sewage connections, without computing the slum Paraisópolis, according to the report, the sewage is released directly into the Pinheiros River.

According to Census 2010, Vila Andrade district from the year 2000 had a population growth of 72%, the population grew from 73,649 inhabitants to 127,015 inhabitants in 2010, of which 33.21% residing in slum Paraisópolis. The district occupies an area of 1,030 Ha with a density of 0.123 hab/ha presenting a growth rate of 8.63. About the income, 2,015 people have no income, 16,954 people earn between 10 or more than 20 minimum wages, 21,586 people earn between 1 to 5 times the minimum wage and 261 people earn up to one minimum wage.

The field research found that this region has low quality public spaces. It has an urban design that requires the use of individual transportation, discontinuous road system, and steep streets without exit, narrow sidewalks, precarious public transportation, poorly maintained squares, and gated communities with high walls for large areas leaving humans away from sidewalks.

The data collected, presents the lack of urban infrastructure and leisure facilities in this district that had the highest number of projects launched in the real estate boom period in the metropolis. It indicates also that the condominium are built in city areas which irregular occupations by slums and low-class neighborhoods. We can say that the occupation of large areas of land by the condominiums, and the large leisure areas of private common use, renounces the social demand from the public sector to build public recreational areas such as parks, squares, sidewalks and other urban infrastructure inhibiting people to use and appropriate public spaces in the neighborhood. It proposes a new dynamic to the spaces causing segregation. Exemplify a new standard of social organization in urban space. Privatisation, enclosures, policing borders, creating a fragmented public space.

## THE INFLUENCE OF MUNICIPAL, STATE AND FEDERAL URBAN LEGISLATION IN THE PRODUCTION OF CONDOMINIUM CLUBS.

The formal condominium clubs outcome is given by the set of rules contained in the different spheres of government: Federal, State and Municipal, whose acting, jointly or separately, enabled the creation of residential vertical model. It may be noted the Law of land use and occupancy of the Municipality, is directly linked to the creation of the common areas of the projects. The law 7.805 / 72 which regulates the urban instrument called “Adiron formule” allows in certain areas of the city, as smaller is the lot rate occupancy more is the lot verticalized buildings allowed without paying compensation for it. This explains the presence of large spaces of free areas in condominiums and increasingly tight spaces of the residential units.

The Municipal Decree 45.817/05 which deals with the classification of residential and non-residential uses, explains the emergence and spread of leisure facilities, advertised as differentiation in the projects. For lots bigger than 20,000m<sup>2</sup> and 400 residential units, require 15m<sup>2</sup> per Housing Unit (HU) of green and wooded spaces in uncovered areas and 1m<sup>2</sup> / HU common use of recreational equipment.

The State Law 9.999/98 regulates the use of industrial areas and allows the use of residential, commercial, services and institutional in areas where industrial use has been mischaracterized

The Federal 6.766/1979 law, responsible for disciplining the division of urban land also contributes to increase lot areas setting minimum and not maximum measures of lots resulting in installments. (LEI, 6766/1979, Article 4). According to Alas<sup>13</sup>, if there is no limitation on the lot size on the legislation is easier to real estate developing general Sales Value strategies. Then appears the demand for large lots found in areas with urban infrastructure such as in Vila Andrade, Villa Sonia and Morumbi.

There are also state and municipal laws approving urban operations played an important role in increasing the lot. The State Law 11,732 / 95 approving the urban operation Faria Lima, Law 13,260 / 01 approving the Urban Operation Agua Espreada 13,885 / 04 and the approved law responsible for the AIU – Area de intervenção urbana 23 de maio ( May 23 avenue Intervention Urban Area ) . All of them had an incentive to vertical integration and lot reorganization through tax incentives for resulting a lot above 2.500m<sup>2</sup>.

Due to the size that enterprises reached, the New Strategic Master Plan, approved in 2014 by São Paulo Municipality, proposed a better urban integration of the buildings by encouraging the Active Facade, Public Fruition and larger sidewalks. Measures that provide higher urban and environmental quality in the regions of higher density. In the “neighborhood centers”, the new strategic master plan sets maximum heights (up to 8 floors) and constructive densification controlling dispersed verticalization of large enterprises; it defines also a centralities network with urban and social facilities.

The land use, mainly these of large spaces, built by big real estate developers, suffered restrictions for the approval of the new zoning law PL 272/2016 which governs the parceling, use and occupation of land in São Paulo, according to Law No. 16,050, of July 31, 2014 PDE. Determines how guidelines for parceling, use and occupation of land, among other measures, the limitation and conditioning installation of medium and large enterprises. Considers the urban conditions of their environment, in order to provide better balance between public and private areas, better interface between the public street and the building and greater continuity, capillarity and connectivity of the road system. Article 42 of this Law stipulates that the maximum lot area within the urban area of the municipality is 15,000m<sup>2</sup> and a maximum of 150m front, both of which can be smaller according to the zone where the lot is located. Article 43 determines the maximum area of the court within the urban area of the municipality of 15.000 and the maximum length of the block must be 300m. Blocks above these measures should provide a pedestrians route every 150m. With these limitations, the new strategic master plan and the new zoning law restricted the possibility of developers to build large real estate projects.



## CONCLUSION

Through the 2000s, one can note significant changes in real estate and urban space due to the influence of factors such as dispersal of industrial production, changes in municipal, state and federal legislation, and changes in the financing and distribution system income. These changes in the real estate sector together with public policies have given rise to a new real estate product we call condominium clubs.

In the district of Vila Andrade, it was possible to identify the performance of real estate, together with public policies encouraging the construction of high standard buildings, walled, with private security and large recreation in rural and remote areas of the city with low urban infrastructure sharing space with precarious housing. The survey data shows that the condominium clubs can be described as an urban typology, in the sense their spatial configurations in the local context have induced new territorial dynamics, guided by the spatial segregation and social exclusion, and has contributed to the reduction of open public spaces of coexistence by the municipality.

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# African Planning Histories and Urban Risk

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Chair: Susan Parnell



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# THE ROLE OF PLANNING IN BUILDING A CAPABLE STATE: REFLECTIONS ON POST APARTHEID CHANGE

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More than two decades after the transition to democracy it is possible to reflect on the macro processes of urban change in South Africa and the role of planning, broadly conceived, in the remaking of a democratic and developmental state. The post apartheid transition holds lessons for other post conflict and impoverished nations seeking to fundamentally adjust the service delivery record of government to meet the needs of the poor and vulnerable. The South African experience reveals that building a capable state is central to the developmental planning process, occupying a critical role as a keystone institution that is accountable through a democratic system. The paper uses specific examples from the post '94 expansions of water and transport services to argue that having a range of planning capabilities within the state reduce risk and promote resilience. These include: deep sectoral expertise; having custodianship of settlement information; fiscal and legal administrative oversight (over government and parastatal institutions but also private companies through the taxes that are due); a mandate for development oversight (design and enforcement); and the power to uphold the rule of law.

**Keywords**

South Africa, Capable state, Planning capabilities



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# EXAMINING THE HISTORY OF REGIONAL PLANNING THROUGH THE LENS OF FOOD SECURITY: THE CASES OF KENYA AND ZAMBIA, C1900 TO 1960

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This paper examines the history of the problem of food production and marketing as a way to understand the development of regional planning in East and Southern Africa in the early to mid-twentieth century. Ideas and practices around how to produce, distribute and market food (as an important sector of agriculture more generally) provided a major impetus to conduct spatial surveys and plan land use and infrastructure development at the regional scale. What we would now recognise as 'regional spatial planning' arose from the 1930s as a new strategy for colonial governments to respond to the problems and risks of economic development. This strategy involved new conceptualizations of risk, of the state's role in development, and of the objects and modes of government. It was a strategy made possible through technological changes including the development of food processing technology and aerial survey techniques, and scientific changes including the rise of soil ecology as a discipline. The empirical focus of the study is the British colonial territories of Kenya, Zambia and Tanganyika.

**Keywords**

regional planning, food security, food production, food marketing, Kenya, Zambia, Tanganyika





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# RISKING URBAN PLANNING IN THE AFRICAN PAST

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Intervening in actual and anticipated public health and sanitation crises has been a dominant thread in African city planning historiography. The association of disease with unequally resourced city districts is a familiar trope. Research in some cities has pinpointed the more-or-less cynical failure to actually implement urban visioning and planning schemes from the 1920s to the 1950s, and the long tail of non-planning for some time thereafter. Evidently, the risk of undermining entrenched advantages was too high to make sweeping urban change. And whereas some social strata did benefit by reduced urban health risks after displacement of others from poor housing and deficient sanitation, city planning did not grapple with the longer-term socio-economic, political and environmental risks of rapid in-migration and 'slum urbanism'. When African cities were still small, risks were slight and often just for the calculus of householders and entrepreneurs. Some migrants and expats could de-risk 'at home' beyond African cities. Local personal and civic risk was calibrated against insurable fire and flooding in contemporary settlements, and against manageable service interruptions and policeable social unrest. Planners never anticipated the pace and scale of African urbanisation in the second half of the twentieth century. Nor was risk ever denominated in terms of long-term vulnerabilities being engineered blithely into future cities by current technologies, funding mechanisms and governance. Dissociating risk from urban futures in Africa arose from powerlessness, complacency, failure to desire and imagine different cities and predict systemic threats, and misplaced conviction in the durability and morality of the status quo.

**Keywords**

African cities, Colonial city planning, Urban risk knowledge



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# URBAN GROWTH MANAGEMENT IN SOUTH AFRICA: POST-APARTHEID PLANNING SET UP TO FAIL

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South African cities, similar to cities in other third world countries, have experienced rapid increases in urban population especially since the new democracy in 1994, resulting in formal and informal consumption of land and physical expansion that are considered by many as “unsustainable”. As a result, many cities in South Africa adopted principles of urban containment and densification in an attempt to combat the negative consequences associated with this pattern of land development. Despite the representation of the above mentioned principles in national and local spatial planning and policies, it has been met with apprehension and hostility from urban role players and in most instances to date, failed to achieve the desired outcomes. In an attempt to understand the shaping of post Apartheid spatial planning and the forces that influenced the approaches to restructuring the urban landscape, this paper investigates the history of and role-players in spatial planning since the early 1990s and the inception of urban containment and densification principles in spatial policies. By using the City of Cape Town’s Spatial Planning process as a case study the paper identifies reasons for the entrenchment of the specific spatial ideologies witnessed throughout the South African spatial planning policy environment, and thus illustrates the influence, good and bad, of history and key role players in the shaping of South African cities.

**Keywords**

Urban Growth Management, South Africa, History, Role Players, Spatial Planning



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# A HISTORY OF INTERWEAVES AND CONTROVERSIES: ITALIAN URBAN MODELS TODAY IN THE TERRITORIES OVERSEAS

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This international research effort aimed at linking Italian colonial and post-colonial history to the history of other former countries and Europe. Asmara and Massawa in Eritrea, Addis Ababa and Gondar in Ethiopia, Mogadishu in Somalia, Tripoli and Benghazi and farming villages in Libya, have been planned during the Italian colonization in Africa. Urban planners and architects, despite the rigidity of the fascist policies in Africa, have designed inserts and grafts of cities and territories taking into account, from time to time, the morphological characteristics of the pre-existing town. In this research we were included studies conducted from the Nineties to present day by Italian scholars (pertaining to the University of Rome and Bologna) and of those African countries that have been involved in the Italian colonial history. Through archival documents collected from Italian and foreign institutions, the study focused on the formation of the settlements related to the colonial era, some of whom now live in a state of serious social and political crisis. In particular, Mogadishu and the Libian villages, both in the heart of conflict's zones, have long been subject to tampering and destruction. The relationship between the systematic destruction/erasure of the contemporary city of Mogadishu and its colonial-era planning has been explored taking into account the structural relations, formal and functional, between colonial city and pre-existence, and by analysing the link between 'formal' cities and the 'unplanned' traditional rural parts of the pre-existing village.

The Libyan rural villages, designed as for a revolutionary farming in desert areas between Tripolitania and Cyrenaica, were gradually abandoned and in many cases have become places of imprisonment.

The main objectives realised of our work can be summarized as:

- creating a digital collection of documents of Colonial Planning, Landscape and Architecture (master plans, cartographies, maps and photographs), to support the knowledge of these settlements. The collection of documents is fundamental for the works of maintenance, restoration and sustainable management of the urban and territorial landscapes, in view of a process of urban regeneration post-decolonization;
- promoting an awareness campaign aimed at training on Mutual Heritage between the involved Countries (Italia, Libya and Horn of Africa);
- promoting the safeguarding policies of European cultural heritage of former Colonies, through the construction of a model/prototype for a Multimedia Archive of the tangible/intangible cultural heritage, containing historical documentation of former European colonies.

The hoped goal is:

- sharing online the digital resources, solving the problem of copyright, which has different legislations in European Countries.
- creating a sustainable model of new social and cultural citizenship between former European colonizers and former colonized countries, building a 'common ground' and creating new cultural alliances.

The study focuses only on Italian Eastern Africa, because the history of Italian planning in Albania and Greek Dodecanese had different assumptions and developments, due to the presence of the Ottoman Empire Heritage.

## Keywords

Italian Urban Models, Colonial Africa, Cultural Alliance, Cultural Citizenship, Shared History



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# Historic Urban Morphology

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Chair: Jeffrey Cohen





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# EXAMINING THE RELATION BETWEEN THE URBAN PATTERN AND URBAN HISTORY: USING GRAPH THEORY-BASED NETWORK INDICES

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Cities have always been physically shaped through social and economic activities, as well as human experiences. In addition to the socio-cultural diversity of communities, the spatial layout of the cities tells us about the history, and the human experiences reflect the spatial structure of cities. The composed multi-layered structure of cities that depend on its own historical periods could be seen in today's cities. The historic cores of most cities are well preserved, and they continue to be the visual representations of their historical spatial structures.

By looking at historical remains, one can easily see that history has an effect on urban physical structure or on urban form. For an objective evaluation, quantitative analyses can be applied to understand the relation between the urban pattern and urban history. Based on this idea, the study focuses on how the relation between the urban pattern and urban history can be explained by using Graph Theoretic measures. There are six common Graph Theoretic measures: (1) edge density, (2) edge sinuosity, (3) eta index, (4) node density, (5) order of a node, and (6) beta index. In this study, these measures are calculated for a 1 kilometer radius area in the urban cores of three different European capitals: Lisbon, Rome and Sofia. Selected cities have more than 1 million populations, and they are located in different parts of Europe. Lisbon is located on the Western Europe, Sofia in Eastern Europe, and Rome in central Europe. These measures provide a comparable frame to attain knowledge about the urban pattern as complicated or simple, and help to understand the idea about movement continuity in the urban settings. If the street segment length is high, the movement flow is more continuous. The results show that urban pattern of Rome is more complicated than the others. On the other hand, Lisbon has a more fragmented structure, which may affect the level of pedestrian activity.

This study is important for understanding urban morphology in quantitative ways. The findings are discussed with respect to each city's historical background. The results show that the cities with similar historical backgrounds may have similar urban patterns measured through Graph Theoretic measures.

## Keywords

Urban History, Graph Theoretic measures, Urban Pattern.



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# FROM STREET NETWORK ANALYSIS TO URBAN HISTORY

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The evolution of cities can be studied in different ways. While some researches look for exogeneous reasons (social, economic, cultural, physical...) which could explain the growth or decline of cities, others focus on endogeneous laws which constraints such phenomenons. Morphology takes place in this second category. It suggests that a theory of urban form's evolution should rely on models which simplify reality, in order to focus on a single aspect: the form itself. Furthermore, the modelling that I propose focuses on a single component of urban form: the street network. The purpose of this paper is to show how the analysis of the street network's evolution will bring insights about the city's formative process. Some authors have insisted on the necessity of perceiving this process as an *action-retroaction mechanism*: on the one hand, local modifications that occur in the street network have an impact on its global properties (in terms of centrality e.g.); on the other hand, the global network yields a conditioning on its elements' substitution, which provokes, at least during a period of time, the stability of its global properties. To expose those stability and change, I compared the morphological properties of street networks, in a diachronic way. An interesting result was obtained by analysing the street network of the city of Beauvais (France), before and after World War II. I demonstrated significant differences between the network's properties, which allowed me to retrace a part of the city's formative process.

## **Keywords**

morphological analysis, street network, evolution of urban form, urban history

## **How to Cite**

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## INTRODUCTION

The plan of a city keeps traces of its history, that's the main hypothesis of most morphological analysis. Indeed, the proponents of the approach consider that we can learn things about cities' history by focusing on the evolution of their form. This aspect has been widely criticised, for the bait it may induce by making people assume an auto-perpetuation of urban forms, « *we can't think of urban forms without their social references* » some argue<sup>1</sup>. This said, the city is not either the ground track of social references, since the persistence of urban forms despite various contexts is opposed to that. Furthermore, some criticisms against morphology may come from a misunderstanding of the analysis' purpose : morphology doesn't aim at capturing reality, it only aims at simplifying it, by casting aside all the functions, senses or histories that everyone associate with forms, and focusing on the study of a single aspect, the form itself<sup>2</sup>. Morphologists consider that this knowledge is worthwhile and can afterwards lead to a better understanding of the causes behind the observed forms.

This approach has been first introduced by August Meitzen (1895)<sup>3</sup>, who tried to identify the relationships between patterns of agglomeration and socio-cultural organisations. Since then, the morphology of agglomerations has been studied from different perspectives: while archeologists used it to identify missing structures, architects and urban planners used it as a way to plan projects<sup>4</sup>. For their part, historians' works aimed at identifying typical plans of a certain period rather than describing the processes of transformation that occur. Thus, most of those traditional morphological analyses showed the difficulty of comparing plans of different cities, and looking for generic processes<sup>5</sup>. That's partially why more quantitative morphological analysis appeared since 1970s, such as Space Syntax<sup>6</sup> which purpose was to measure objectively the social, economic and environmental properties of spatial layouts. Those analyses mostly focused on the structure of the street network, and its relationship with movement flows. Since then, various studies explored the morphology of street networks (mainly using graph theory), and demonstrated the relevance of such approaches to understand the relationship between urban streets patterns and urbanisation<sup>7 8</sup>, resilience<sup>9</sup>, and better urban design<sup>10</sup>. However, with a few exceptions<sup>11 12</sup>, using quantitative tools for historical purpose remains unusual, but starts spreading because of the recent digitization and georeferentiation of old maps.

The purpose of this paper is to expose the relevance of quantitative morphological analysis in a diachronic perspective, with the aim of revealing processes such as the evolution of cities. This relevance is due to the possibility of comparison permitted by morphological analysis. Indeed, by focusing on the form of objects, morphology allows us to compare many of them, as long as they have some morphological common points. We could then compare a city's form through time, and look for regularities or variances that may be hidden by the spatio-temporal particularities of each context. Besides, with relying on previous quantitative studies mentioned before, I will focus on the morphological properties of the street network, considering it as a major component of the urban form, and a good marker of a city's history.

## THE MORPHOLOGY OF STREET NETWORK, BETWEEN STABILITY AND MUTATION

According to Caniggia<sup>13</sup>, the evolution of the street network passes through two kinds of processes. On the one hand, each modification is constrained by the global network, which yields a conditioning on its elements' substitution, and restricts the permitted changes. This inertia is due to the materiality of such infrastructures, as well as to their ability to adapt to various contexts, functions, senses, etc. It means that despite local modifications (which never stop occurring) some morphological global properties remain stable during periods of time, and that's why we can identify typical properties in antique, medieval, or modern networks.

On the other hand, it also happens that the sum of those local modifications affect the global network. The network then turns to another state, with completely different properties. This change usually starts gradually, when the existing network is not anymore optimal to people's quantitative and qualitative needs. People then generate a tension on the existant network, until a boom phenomenon occurs, which provokes the diffusion of new network's properties, and makes the change global. Besides, it also happens that a planning project provokes a major and very fast change in the global network (we will see an example thereafter).

## THE STREET NETWORK, A COMPLEX OBJECT

The two phenomenons mentioned before reveal an important fact: the street network's evolution can't be understood by focusing on a micro scale. Indeed, the stability or the sudden change of the network's morphological properties are emerging phenomenon, which are upper to what is happening locally.

This idea is strongly linked to the paradigm of complex systems, which is the basis of the morphological analysis that I propose here. This theory proposes to consider reality as systems, composed by interrelated elements. Obviously, elements are basic components of a system, but a complex system is not equal to a sum of elements : global properties that don't exist in each part of the system *emerge* on a macro level.

Thereby, the ascertainment mentioned before about the street network's evolution incites us to consider our research object as a complex system with emerging properties. The complex systems theory is opposed to the reductive approach, which consists on decomposing realities into pieces that can be easily studied in laboratory. Complexity avoids those practices, arguing that the knowledge of a part won't tell us anything about the system.

Thus, this theory considers phenomenons as irreducible realities, namely systems, and aims at focusing on the relations between the elements, rather than on their number or nature. This process allows to shed light on the organisation of the system, which according to Edgar Morin contains its identity : the fixity of the system depends on the fixity of this organisation, and conversely, any change in the system's organisation change the system.

Considering my aim (i.e. describing the long time evolution of the street network), it appears that if I model<sup>14</sup> the street network as a system, I will be able to reveal its organisation (by studying the relations between its elements), for each period of time. Then, the comparison of this organisation through time may shed light on the two phenomenons mentioned before. Indeed, on the one hand, the fixity of the system's organisation will reveal the stability of the network's morphological properties. Note that this fixity may happen when the modifications affect the nature or the number of elements (streets) but not their relations. On the other hand, significant modifications of the system's organisation will unveil global mutations in the network's properties.

## A TOOL TO DESCRIBE THE ORGANISATION OF NETWORKS

Another asset of the complex systems theory is the use of mathematical tools to represent and describe quantitatively the organisation of systems. Among those tools, the graph theory, which consists in modelling the elements of the system as nodes, and their relations as edges. This representation makes clear the notion of interrelated elements. Moreover, many indicators have been developed in graph theory, so as to quantify graph properties, the best known being centrality, density, community detection, etc.

As said before, graphs have been widely used to describe the properties of street networks. It generally consists of modelling each street as an edge, and each intersection as a node<sup>15</sup>. We then compute the property of each element, which depends on its topological and metric relations with others. For example, the betweenness

centrality<sup>16</sup> of a node depends on its topological position regarding to others : the more a node is in an intermediate position between many others, the more its betweenness centrality will be high.

Once the centrality (or any other indicator) computed for each node, the purpose is to describe the global organisation of the system<sup>17</sup>. To do so, I observe how the said property is globally distributed in the network, (i.e. where are situated the most central nodes, etc.). I then try to synthesise this distribution, using diagram, graphs, sketches, etc., which gives an abstract of how the elements are interrelated topologically and metrically. Thus, I finally unveil the global organisation of the system.

As mentioned before, only few researches have used graph theory to compare the organisation of street networks through long periods of time. Yet, we can easily see how relevant would be the comparison of networks' global organisation from a period to another. It will allows us to reveal the two kind of phenomenons mentioned before: the fixity of the organisation despite local modifications, and the mutation to a different organisation.

## APPLICATION: CASE STUDY AND MORPHOLOGICAL INDICATORS

Thereafter, I will explain how my methodology has been tested on my main case study, the city of Beauvais, a small town located 78 km north of Paris.

After being the site of a royal tapestry factory in the seventeenth-century, Beauvais remained on the sidelines of the industrial Revolution of the nineteenth-century. Indeed, when most important cities became railway junctions, Beauvais was still in the era of stagecoach till 1876. This delay in the industrialisation of the city<sup>18</sup> allowed it to preserve its urban heritage. Indeed, even if the population of Beauvais doubled between 1850 and 1900, researches revealed that during this period, the urban fabric mainly remained unchanged<sup>19</sup>, with regular narrow streets<sup>20</sup>, irregular blocks, and wood houses.

Unfortunately, World War II has ultimately destroyed the historical center of Beauvais. Approximately 80% of it caught fire on June 1940. A major and very fast reconstruction project followed, from 1946 and 1960. The main purpose of the project was to adapt the city to new transportation means, thus, major roads toward other cities have been rejected outside of the center, the old paths was at some points preserved, and at some points replaced by more continuous and geometric ones, which often reshaped the ancient blocks.

Thus, it seems that Beauvais passed through various events, which affected or not its urban fabric. Those information was given to us by analysing the history of the city, but what if we cast aside the latter? Can we learn things about Beauvais without knowing in depth its history? Is it possible to read this history by comparing the city's form through time? Or more precisely, by comparing the organisation of its street network?

To answer those questions, I chose to compare the street network of Beauvais' historical center, at three moments. The first moment is 1849, period in which the city is mostly still in its traditional shape, with no train station (1876) nor manufactories. The second moment is 1888, when the city started its industrialisation, but without major urban changes (according to researches). Finally, I will analyse the street network after postwar reconstruction, in 1960, when the street network has potentially been completely reshaped.

Furthermore, I chose two main morphological indicators, so as to describe the organisation of the three street networks. The first indicator, proposed by Salat<sup>21</sup> is a metric one, which means that it describes the metric relations between the elements of the system. Put another way, it amounts to focus on the size of each element (length, width, area, etc.) and describe the global distribution of the latter, which completely depends on each element's size. Here, elements are the streets, and the size considered is their width.

In practice, the study of the streets width distribution amounts to find the quantity of streets (total length) for each width category. To do so, I compute the length and the width of each street, and report it in a table. I then fix width categories, for instance:

- Narrow streets, between 1 and 7 m.
- Medium streets, between 8 and 14 m.
- Large streets, between 15 and 21 m.
- Very large streets, larger than 22 m.

I then compute the quantity of streets that belong to each width category, by summing their length. Next, I describe the obtained distribution: which category is the most represented? Does the quantity of streets increases or decreases when the width augments? Finally, the representation of those results in a synthetic way, through diagrams or sketches, allows me to shed light on the street width organisation of the network: is it mainly composed of narrow streets as in traditional networks, or of larger streets as in modern ones?

After making this analysis on each studied period, I compare the three streets width organisations, the results will be presented thereafter. Note that those results reveal one single aspect of the network's organisation, which is the streets width distribution. As said before, morphology simplify reality, in order to reveal hidden properties that don't appear without focusing on one single aspect and casting aside all the rest.

Otherwise, crossing those results with ones provided by other indicators will be interesting so as to reach a more global description of the network, at each moment. This comparison may also reveal differences between the indicators: some of them may remain stable for long, while others may change faster. Thereby, I will be able to nuance and describe more precisely the morphological changes.

Thus, a second indicator has been chosen, which is accessibility. The latter, developed by Lagesse<sup>22</sup>, depends on both topological and metric relations between elements. It reveals how many turns it takes and how far it is, on average, to go from a given street to the rest of the network. Basically, long straight streets have a high accessibility, because they cross the network from one end to the other, and permits to reach a lot of other streets. Thus, the more a street is close to those long straight streets, and permits to reach them with a low number of turns, the more its accessibility is high.

Accessibility has been computed by Lagesse on the street network of the city of Beauvais, for my three studied periods. Those results gave me the organisation of the network's accessibility, which I tried to synthesise by wondering: how the accessibility is distributed? Where are situated the most accessible streets? Where are the less accessible ones? Finally, I compared the three periods and discussed the results in regard to the previous indicator, which is the streets width distribution.

## PRELIMINARY RESULTS

The analysis started by a laborious work (that I will not detail here) of digitising, georeferencing, and redrawing nineteenth and twentieth centuries plans of Beauvais. This step allows me to obtain harmonised data for the three street networks, in a GIS format. Note that the streets which surround the city center has not been considered because of their imprecision on the plans. I kept them as borders for the city center.

For the analysis of the streets width distribution, I used the old plans to compute the length and width of each street. The result for 1849 is presented below (figure 1)

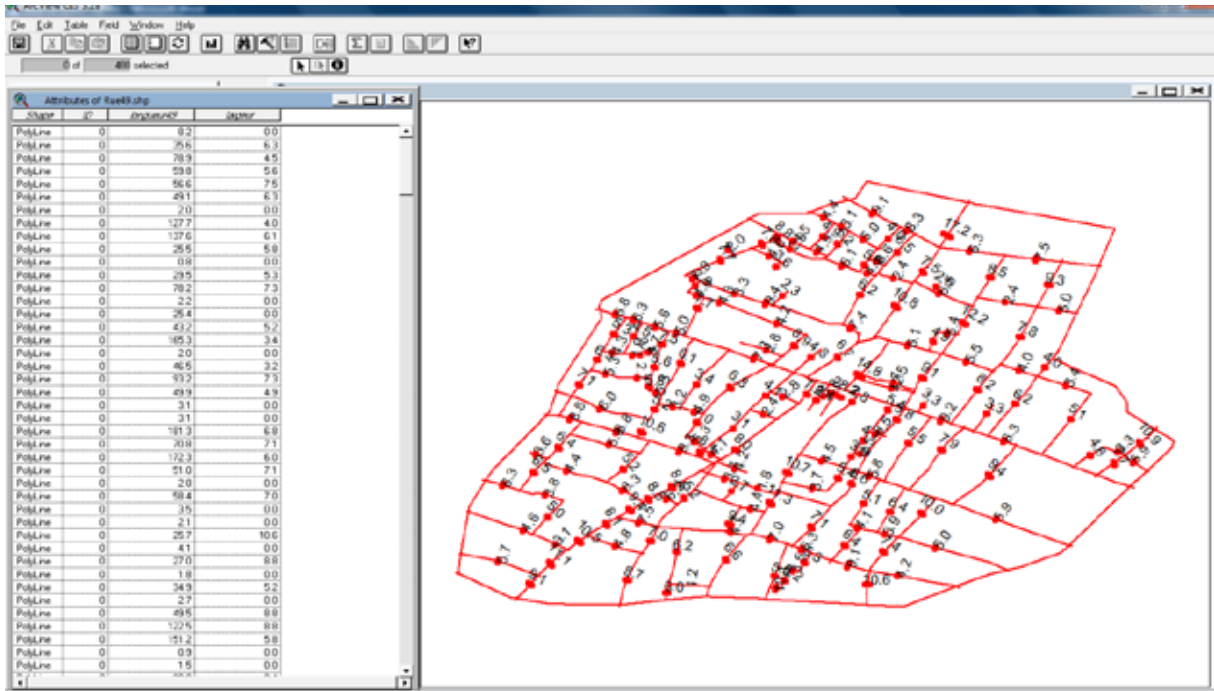


FIGURE 1 The drawing and the table of lengths and widths of streets in 1849.

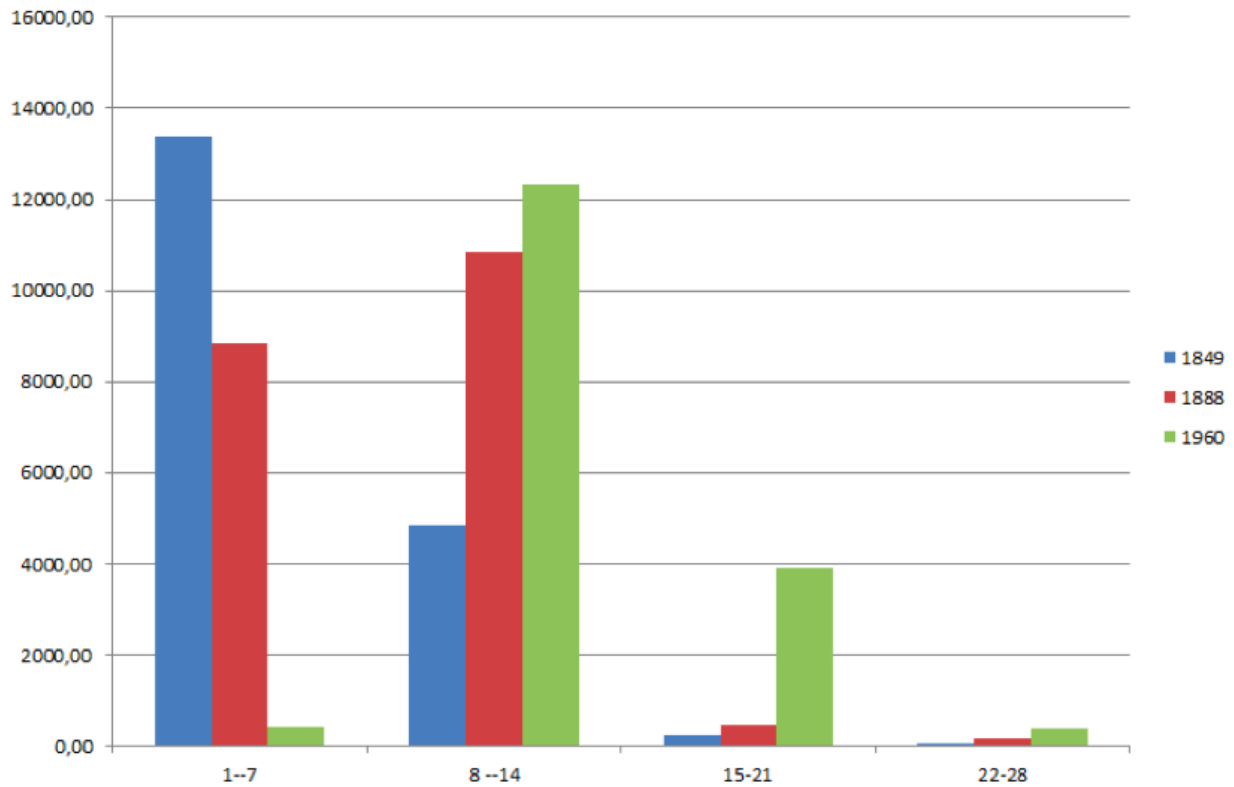


FIGURE 2 The diagrams of the three width distributions : 1849 in blue, 1888 in red, and 1960 in green.



After that, streets width categories have been fixed as mentioned before, and the emerging distribution for each period has been represented with diagrams (figure 2)

Concerning the 1849s distribution (in blue), the network seems dominated by narrow streets (between 1 and 7 m), and has almost no street wider than 14 m. This distribution was expected, since the city at this period is still in its traditional shape and on the sidelines of the industrial Revolution changes. In 1888 by contrast (red), the total length of medium streets double, while the narrow ones decrease a little. This decrease may be due to a less accuracy of the 1888s plan comparing to 1849s one, but also to the suppression of some very narrow streets during this period. This said, the high increase of medium streets was an unexpected phenomenon, since the researches did not mention major urban changes during the second half of the nineteenth-century.

On 1960 (in green), the distribution is completely different, narrow streets has almost completely disappeared, medium streets keeps on increasing, but the major change is the spread of large streets, which were very few thus far in the city center. This distribution was partially expected, since the postwar reconstruction reshaped the whole network, but this result strongly emphasised on the denial of preexistent narrow streets, and on the will of passing to a larger scale.

For the accessibility, Lagesse only needed the drawing of the network's skeleton. She then used the QGIS plugin she developed<sup>23</sup> to compute many indicators, among them the accessibility of streets. The results for the three periods are represented in figure 3, 4 and 5.



FIGURE 3 The accessibility of streets in 1849. Higher accessibility in red, lower in blue.

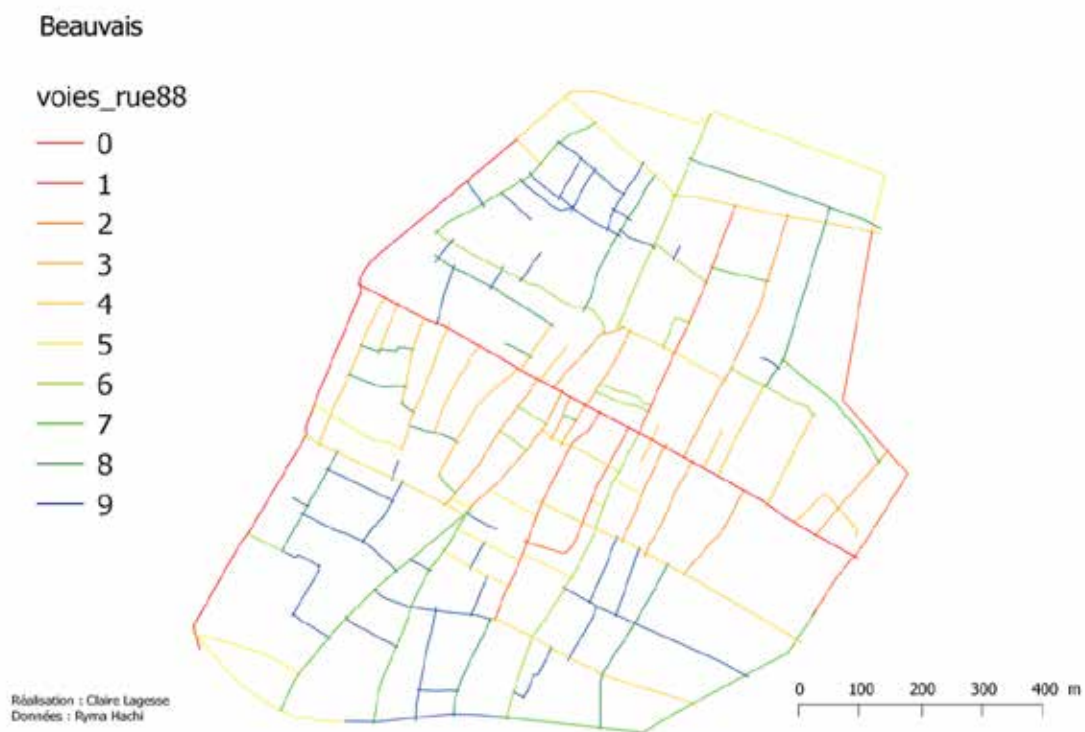


FIGURE 4 The accessibility of streets in 1888. Higher accessibility in red, lower in blue.

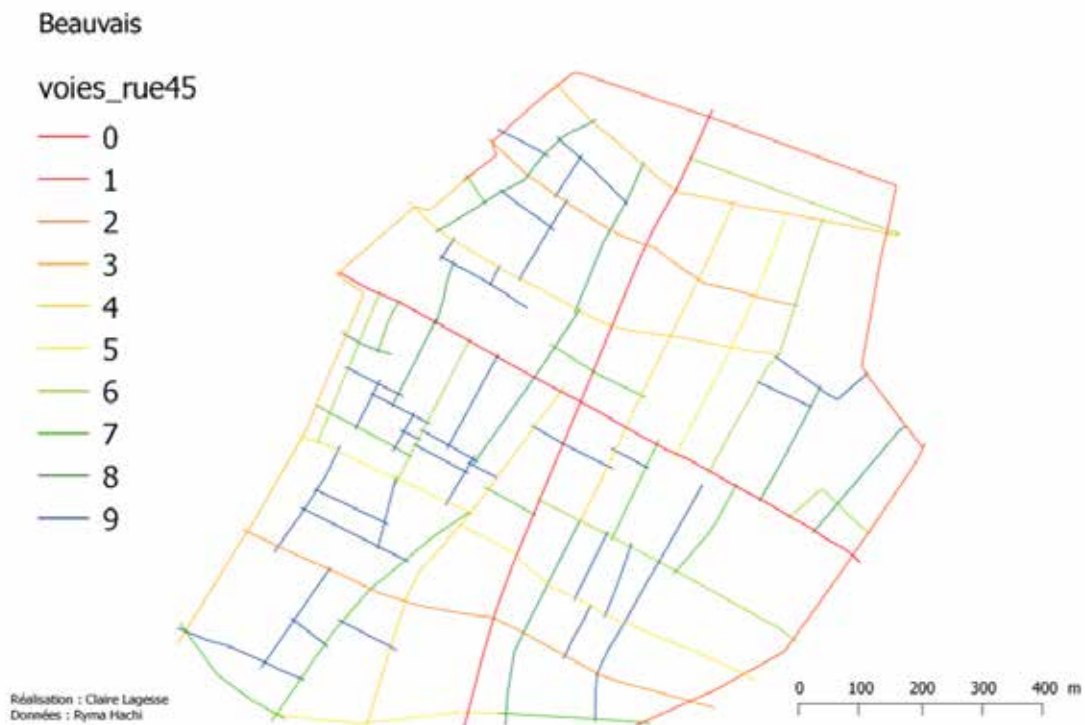


FIGURE 5 The accessibility of streets in 1960. Higher accessibility in red, lower in blue.

In 1849, the most accessible street (in red) is the long and straight one which cross the city from est to west. As expected, the streets which are directly connected to the latter have also a high accessibility (in orange), even if their length is low. Those red and orange streets correspond to the ancient city center, on which were situated most of the central activities such as the market place and the cathedral. Otherwise, the more a street is far from those streets (in terms of distance and number of turns), the less its accessibility is (represented in blue and green).

In 1888, the accessibility almost remains stable, besides some local changes, due to the alignment of few streets, which provokes the increase of their accessibility. The 1960s results seem very different, since a second very accessible street appear, perpendicularly to the first one. This second street seems to surpass the first one, indeed, the accessibility of streets which are connected to it increased, when the ones connected to the first one lost their accessibility.

This change is probably due to the alignment of the street which cross the city from north to south. This long and straight street became more accessible than the historical one, and provoked a major change in the distribution of accessibility, which leads to a relative exclusion of the ancient city center.

Globally, the organisation of accessibility between 1849 and 1888 is typical of historical cities (see figure 6), with a single major street<sup>24</sup> containing the market square, on which many streets graft, and so forth. In 1960, the organisation is less apparent, two streets have a very high accessibility, the north/south one became the new city center (where are nowadays situated shops and central activities), and the est/west street, which remains accessible because of its length, but does not spread its accessibility anymore. Thus, it seems that the postwar reconstruction has deeply affect the accessibility of the network, by increasing the length and the straightness of many streets, so as to adapt them to cars traffic.

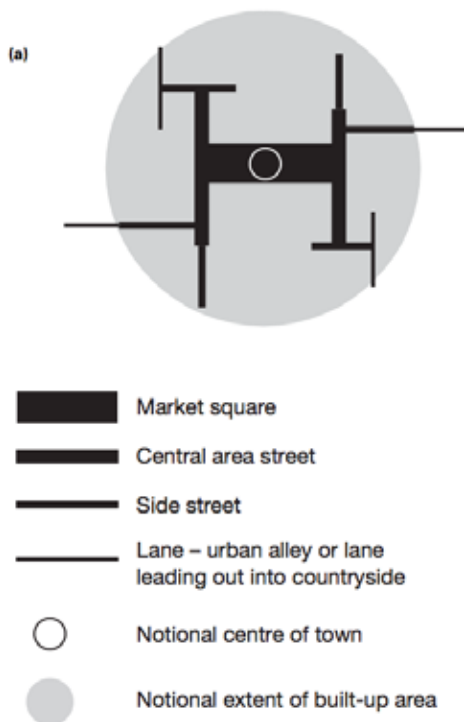


FIGURE 6 A schema of streets' organisation in historic cities.

## DISCUSSION AND CONCLUSION

By considering the street network as a system, and by studying metric and topological relations between its components, I revealed a part of its organisation, for each studied period.

Between 1849 and 1888, I revealed a relative stability of the network's organisation, but also unexpected changes. Indeed, even if the distribution of accessibility remained quite similar, the one of streets width changed. Thus, despite what the researches say about the stability of the urban fabric during the second half of nineteenth-century, I would nuance this affirmation, since it seems that during this period, local modifications started affecting the global organisation of the network. If we introduce the external context, we notice that people's needs started changing during this period<sup>25</sup>, and we can expect that the sum of those local modifications were going to induce a boom phenomenon, which would spread a global change of the network's organisation.

World War II accelerated this boom, and provoked a major change both on the width distribution, and on the accessibility of the network. Indeed, the denial of preexistent narrow streets during the reconstruction, and the emergence of a second very accessible center are two signs of a deep modification of the network's organisation. We can consider this fast change as a mutation of the system, but the latter was already prepared since the second half of the nineteenth-century.

Thus, the analysis of Beauvais' street network did not reveal the expected fixity of the system's organisation between 1849 and 1888. It rather emphasised on two different kinds of changes: a gradually one, emerging from people's local modifications during the nineteenth-century, and then a sudden one, provoked by a global planning project.

Thereby, I demonstrated that using morphological indicators permits to describe quite precisely the organisation of networks through time, and to reveal changes that are not mentioned in literature. This emphasises the relevance of diachronic morphological analysis (which remains slightly used so far) for the study of urban form's evolution.

Otherwise, one of my futur aims is to reveal the potential causes of observed fixities or changes. This purpose implies a wider comparison through time (many periods) and space (different cases studies), so as to identify correlations between a certain kind of external context and the change or the fixity of the system's organisation.

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## Disclosure Statement

No potential conflict of interest was reported by the author.

## Notes on contributor(s)

Ryma Hachi is a second year Ph. D. student in urban geography, at the laboratory Géographie-cités (Paris 1 Panthéon-Sorbonne University). She is an architect and she holds a Master degree in Urban History, from Paris Diderot University. Her research is about the use of morphological analysis in the study of cities' formative processes. Her two cases studies are Paris and Beauvais (France).

## Endnotes

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- 5 *Ibid.*
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- 14 Modelling is representing reality in an abstract way.
- 15 The opposite is also possible (*dual graph*).
- 16 Linton C. Freeman, « A set of measures of centrality based on betweenness », *Sociometry*, 40 (1977) : 35–41.
- 17 As in any modelling based on the complex system theory.
- 18 That was partially due to people's attachment to handicraft.
- 19 Ville de Beauvais, *Dossier de candidature au label Villes et pays d'art et d'histoire*, (Beauvais : Ville de Beauvais), 164 p.
- 20 That mostly followed the antique paths.
- 21 Serge Salat, *Les villes et les formes, sur l'urbanisme durable*, -1e éd. (Paris: Hermann, 2011), 544 p.
- 22 Claire Lagesse, et al. « A spatial multi-scale object to analyze road networks ».
- 23 In collaboration with Oslandia company.
- 24 Which is usually the continuity of regional access roads to the city.
- 25 With the industrialisation.

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## Image sources

- Figure 1: Data and realisation : Ryma Hachi.
- Figure 2: Data and realisation : Ryma Hachi.
- Figure 3: Data : Ryma Hachi, realisation : Claire Lagesse.
- Figure 4: Data : Ryma Hachi, realisation : Claire Lagesse.
- Figure 5: Data : Ryma Hachi, realisation : Claire Lagesse.
- Figure 6: Marshall, S. (2004). *Streets and patterns*. Routledge.

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# THE VISUAL REPRESENTATION OF THE NETHERLANDS IN EIGHTEENTH-CENTURY HISTORICAL- TOPOGRAPHICAL DESCRIPTIONS

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The most substantial historical-topographical description of the Dutch Republic in the eighteenth century is *De Tegenwoordige Staat der Vereenigde Nederlanden* (The Current State of the United Netherlands, 23 volumes, 1738–1803). Augmenting this was a richly illustrated publication, *Het Verheerlijkt Nederland* (The Netherlands Exalted, 9 volumes, 1745–1774). Because of their encyclopaedic approach, these publications can be regarded as typical products of the eighteenth-century Enlightenment.

This contribution aims to investigate the way in which the enormous task of making the more than 1000 engravings for the two combined publications was organised. Which areas, cities, villages, buildings, etc. were illustrated, and which were not? Which criteria did the editor, Isaac Tirion, and his team of illustrators use, and why? In comparison to my earlier research on this subject, published recently in the *Bulletin van de Koninklijke Nederlandse Oudheidkundige Bond* (2015), the research method is different and innovative. I will focus on the geographical distribution of the illustrated locations in order to find out patterns and systems in the organisation of the two publications, and research the different ways their target audience could use the illustrations.

Surprisingly, most of the buildings depicted in *De Tegenwoordige Staat* and *Het Verheerlykt Nederland* were quite old, dating back to the Middle Ages, while illustrations of seventeenth- and eighteenth-century buildings were far rarer. The historical-topographical series differ little in this respect from comparable antiquarian publications. A building's age must consequently have been an important criterion for both the publishers and the purchasers of historical-topographical works. This contribution explores the possible reasons for these preferences.

## **Keywords**

Visual representation, Netherlands, eighteenth century, historical-topographical descriptions





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# MORPHOLOGICAL CONCEPTS FOR THE URBAN RENOVATION

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Strengthening of regional centres in the Russian Federation takes place at the end of XX - beginning of the XXI century with the collapse of the centralized system of city planning. This is a period of global restructuring of cities associated with the radical change in industrial technologies. However, this is a period of comprehension and recognition of the uniqueness of each human settlement in the urban culture of the world as well. Therefore, a new stage in the development of regional centres consists in changing the purposes, objectives and methods of urban renewal. Preservation of cultural and architectural landmarks and their protection zones was expanded to the development of a unique "image" of the city and its restructuring. Thus, morphological studies have acquired a special role in the process of the cities reconstruction because historic preservation and integration of the valuable fragments of the city fabric into the new logic of strategies, policies and plans of the renovative development ask for the knowledge of universal laws of settlements formation. Background studies of unplanned functions and objects in the structure of the modern city confirm the importance of scientific concepts of urban morphology. They explain not only many unforeseen processes of formation of functional and structural elements of the plan of the city but prove that they are inevitable. Comparative morphological analysis of the cities of Krasnoyarsk and Dresden could be given as a sample. Among the most important for modern urban design and planning of urban renovation are the concepts of "market concretion", "landscape units" and the concept of the "fringe belts" as an environment protecting instrument. Findings of the medieval towns investigations are confirmed by the research of the areas of the building construction of the 50-60 years and can be used as the substantiation for the reconstruction principles and methodology for the renovation of the modern cities. A special role is given to the concept of the marginal zone as a system of "membranes" that prevent the structure of the modern city from destruction. Moreover very often fringe belts and marginal zones as a system of "membranes" having been leapfrogged during the periods of large-scale impetuous construction contains real cultural treasures of urban fabric and architecture which need reconstruction and adaptation for new uses and thus become an essential part of reconstruction strategies. In this connection comparative study of the urban form of cities or their parts of different historical and political periods, physical results of the implementation of the planning concepts is of undoubted interest.

**Keywords**

urban morphological concepts, renovation, similarity of the processes of urban structure forming, urban uniqueness



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# THE CITY OF SMALL PIECES: FOOTPRINT-CADASTERS AND FACES OF THE PRE-MODERN CITY AS GRAPHIC TEXTS

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**Jeffrey Cohen**

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For those who study planning history, the urban fabric as it has evolved over millennia is a primary text. Our knowledge of the form of the city before its direct and indirect transformations by the factory, the skyscraper, and the car, however, relies on a range of visual and textual evidence. That historical evidence often reveals the earlier city as a very different place than the one we have experienced, especially for cities that exploded in population and extent during the nineteenth century -- with their old core functionally reassigned and sweepingly rebuilt for consumption and business. Representations of that city show effects of planning in its smallest increments, devised by individuals to serve their own interests, even as they show results of such individual agency that align into distinctive patterns in the built fabric of pre-modern cities.

Representations of those cities in single views and maps, many in Europe dating back to the sixteenth century, show topography and street networks, the overall shape and some of the large distinctive elements of the civic core, but they are typically distanced from the detailed textures of the urban fabric, which they show more generically. Closer but more narrowly framed views offer more specific knowledge of individual buildings and places, sometimes comprising a cacophony of disconnected small parts. Many of those views converge on well-known sites richly recorded, while other pieces of that earlier city are far more sparsely represented.

The great connective tissue for knowing this earlier city, though, is presented in records at a middle scale, specifically in much more detailed maps that capture the particularity of buildings and spaces. These maps, mostly from the mid-eighteenth century onward, go by many names -- ward atlas, plan parcellaire, ordnance survey, or Sanborn map. For the moment we might call them "footprint-cadasters." Their essential aspects are more precise plans of public ways, of property parcels, and, critically, of the outlines of structures, typically with encoded conventions describing buildings and infrastructure. Such detailed maps, at scales sometimes approaching 1: 500 or 1 inch to 40 feet, serve to bring those disconnected views into spatial contexts, allowing us to match footprint to face, and attain a more three-dimensional sense of the visual and spatial character of that earlier city. This can be especially revealing where plans are allied with more expansive upright views capturing dozens of buildings in sequence, specifically the "panoramic" urban streetviews that reached their fullest form in the mid-nineteenth century.

This paper describes a project intended to match those long faces to their footprints as a means of seeing that pre-modern urban fabric. It also explores ways to amplify this visual concordance with other kinds of documentation, building a diachronic perspective offered by comparing more modern views and maps of these same places, enriching these with information about the places depicted, and ultimately populating this with some of their internal plans -- all in effort to better know the fabric of the cities that precede our more direct experience of them.

## **Keywords**

historical urban form, urban evolution, economic urban adaptation, urban vernacular architecture, small-scale planning, pre-modern cities, "organic" urban form, urban documentation, historical urban geography, public history, digital research resources



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# THE HISTORICAL TRANSFORMATION OF IZMIR FROM THE NEOLITHIC AGE TO THE PRESENT

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Akın Ersoy | Ayşegül Altınörs Çirak | Emine Duygu Kahraman | Neriman Yörür

Dokuz Eylül Üniversitesi

Throughout history, Izmir has been an important seaport city for Western Anatolia. Although previous archeological research showed that the city may have been founded in about 3000 BC, excavations at the Bornova Yeşilova site in 2005 confirmed that the city has an 8500 to 9000-year history. According to the evidence uncovered by several research studies, the city of Izmir and its earliest settlements have faced many changes in regard to population, location and landform since the Neolithic age. Despite these changes, the city has been populated continuously for 8500 years due to the benefits of its natural harbor and rich hinterland. However, sea level changes, alluvial river deposits, earthquakes, wars, invasions and mass migrations, have all had dramatic effects on the basic form of Izmir. In this article, the historical transformation of Izmir from the Neolithic age to present is discussed within the context of the reconstruction and changes that have been made to the city's location, demographic, macro form, transportation network, and private and public areas. Within this work, catastrophes caused by both natural and human agents are given in a chronological table and their effects on living spaces are explained using schemas. The story of the urban rise and fall is explained with tables and maps in the basis of the outstanding crossroads. Thus the history of urban resilience in İzmir since the beginning of the first settlement, to contemporary environment, will be discussed. This study seeks to promote a discussion of the post-disaster changes and adaptations made to Izmir. This historical discussion will reveal new perspectives on the problems of planning and preserving urban historical and spatial traces, many of which have been allowed to decay in the recent past due to the influence of the capitalist accumulation process.

## Keywords

Urban History, Spatial Development, Urban Planning, İzmir



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# THE GREEK URBAN BLOCK SINCE THE ESTABLISHMENT OF THE GREEK STATE IN 19TH CENTURY - A CHRONICLE ABOUT MORPHOLOGY AND URBAN FORM

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*Aristotle University of Thessaloniki*

Based on literature and archival research along with specific plans, the study considers the different transformations of the Greek urban block in relation to street network, built and open space. Case studies such as Thessaloniki, Athens, Patra, Serres, offer the opportunity to highlight the evolution of the Greek urban block through representative examples of urban development in specific periods of Greek history: in the neoclassic city of the 19<sup>th</sup> century, during the beginning of 20<sup>th</sup> century, during the interwar period (1923 - 1940) and in the post-war city during 1950s and 1970s. The investigation focuses on the general historical framework connected to urban development, whereas specific masterplans showcase the practice of each period respectively. Moreover, the study highlights parameters, which form, reform or transform the urban blocks, such as planning principles and design tools. The objective of this research is to analyze characteristics and qualities of the morphology of urban blocks in order to understand its importance in the organization of the city.

**Keywords**

urban block, Greek city, urban history, planning principles, design tools, transformation, morphology, urban form, Thessaloniki, Athens, Patra, Serres

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## INTRODUCTION

Greek cities followed a complex historical path due to diverse political, social and economic factors, which influenced in a great extent their urban development. The gradual liberalisation of the Greek territory, the attempt of rationalism and europeanisation from 1820 until 1930s, the settlement of refugees in big urban centres after the population exchange between Greece and Turkey in 1923, the concentration in the cities because of the Greek Civil War in 1950s and the economic growth in 1960s and 1970s, led to multi-faceted transformations of the urban morphology. The predominance of private ownership and building regulations with continuous amendments formed and re-formed the modern Greek city, which is characterised by the massive reconstruction after the 1960s in the existing urban blocks with the building mechanism known as 'antiparochi' (exchange agreement, where the constructor of the building gives a part of it to the owner of the plot) which was established institutionally by the Law Nr. 3741 in 1929 and is dominated by the building typology of 'polykatoikia' (high blocks of flats). As a result the urban tissue of the Greek city has become standardised, expanded with masterplans, which consist a regular orthogonal grid of streets and urban blocks defined by the segmentation of urban land. The main goal of the research is to create an original study about the metamorphosis of Greek urban blocks and highlight their characteristics in four historical periods from the neoclassic city of the 19<sup>th</sup> century until the post-war city.

## THE URBAN BLOCK IN THE NEOCLASSIC CITY OF THE 19TH CENTURY

The neoclassical city in Greece emerged the period after the Liberation with the reconstruction of the newly established Greek state at the administrative, institutional and city planning level. This period also known as a period of rationality from 1830s until the early of 19th century is characterised by the attempt to put the independent Kingdom of Greece on a path of development and modernisation. The organisation of the State based on strengthening the role of the central government with new administrative hierarchy and spatial restructuring based in urbanisation with main concentration in Athens, the new capital of the State<sup>1</sup>. Starting from Kapodistrias presidency in 1828 and then under the Bavarian reign the plan of rebuilding and reconstruction of the Greek city was implemented.

The homogenised masterplan was the tool, which reflected the ideological model of rationality to the layout of the newly established city. The repeated use of the orthogonal grid with specific dimensions, absolute straight alignments, uniform and geometrical structure, rectangular urban blocks, regularity and symmetry, hierarchy of street network, clear separation of private and public space, division of urban land by rational land fragmentation demonstrate a straightforward policy about the urban form of the new city. Karadimou - Gerolymbou notes that the 'Greekness' was identified by the rectangular grid, while the 'Turkishness' by the spontaneous development of pre-capitalist city<sup>2</sup>. The previous unregulated and irregular form disappears and is replaced by order and regularity. At this point it should be noted that the direct influence of the European practice, which has already appeared in the city of the Renaissance and Baroque with the revival of classical antiquity, continued until the modern city in London, Paris or Barcelona.

During the period of Kapodistrias presidency (1828-1832) most of the new masterplans were designed for destroyed cities such as Corinth, Nafplion, Aegio, Argos, Patras, etc. The basic planning principles were the orthogonal grid with a clear definition of the urban blocks and street network, the proper segmentation of urban land, economical construction of buildings and fundamental determination of the limits between private and public space.



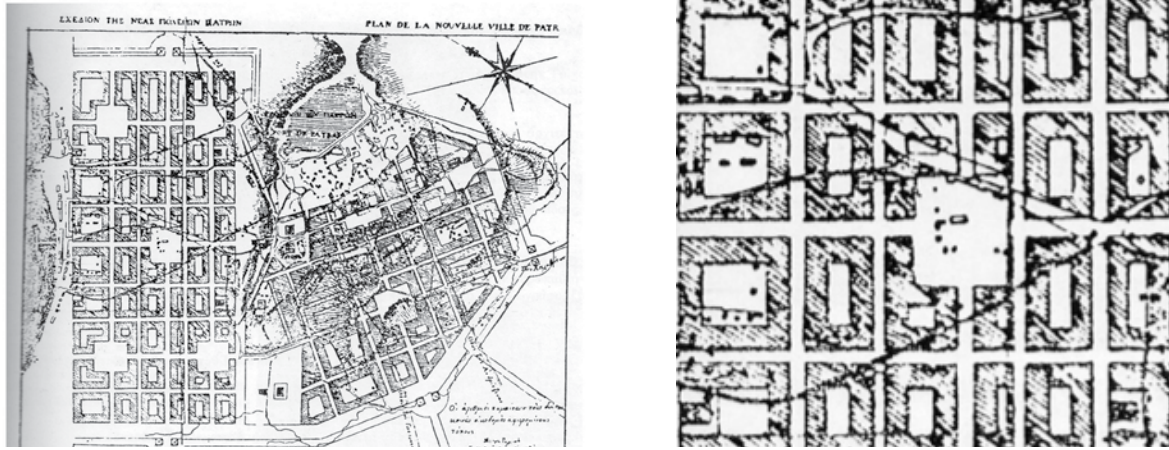


FIGURE 1 Left: The new city plan of Patra by Stamatis Voulgaris. Right: A segment of the same plan illustrating the layout of urban blocks. The orthogonal urban grid is the main design tool of the plan.

A representative example of this period is the masterplan of Patra in 1829 by Stamatis Voulgaris (1774 - 1842), engineer of the French Military Mission and main advisor of Kapodistrias on urban planning issues. The proposal (see figure 1 left) is based on two sections. The geometric composition consists of two orthogonal urban grids, which are intersected in order to highlight the Fortress as a key reference point of the plan. Urban blocks serve as the urban units of the plan's layout.<sup>3</sup> The blocks have different dimensions, whereas the built width is equal for all of them. This characteristic together with the absence of land segmentation displays the essence of unity and uniformity (see figure 1 right). Moreover, the open space inside a block gives it an introvert character.

During the Ottonian period (1833-1862) modernisation and europeanisation continued and urban planning became the main subject of public interest. The new urban projects, directly influenced by the European classicism and Baroque design (orthogonal alignments, monumental prospects, horizontal spaciousness, axial approaches<sup>4</sup>), were associated with the historical period of Greek antiquity. Monioudi - Gavala characteristically notes: "Neoclassicism in Greece was linked to the visionary goal of national rebirth and revival of classical Greek architectural model."<sup>5</sup> Regarding the institutional framework of city planning it is worth mentioning the Decree of 1835 "On hygienic building of cities and villages"<sup>6</sup> which would be the basis of urban planning practice until 1923. This law enforced specific principles of organization and morphology of the cities, building regulations and function of state control. Other laws and regulations, significantly influenced by European legislation, followed and the state continued to dower public land with one condition: to reconstruct as soon as possible.<sup>7</sup>

The new plans referred to reshaping existing cities, such as Athens, Chalkida, Ermoupoli, Monemvasia, Agrinio etc. In order to understand the planning principles and design tools of this period the study concentrates on the first masterplan of Athens as the new capital of the Greek State by Stamatis Kleanthes (1802 - 1862) and Eduard Schaubert (1804 - 1860), architects of the Government and students of Karl Friedrich Schinkel in Berlin. The plan is a representative example of Greek neoclassic planning. The layout is based on an isosceles triangle pointing to the archaeological site (Akropolis)<sup>8</sup> and to a system of several urban grids (see figure 2). The composition is formed by strict geometry highlighting the symmetry and the perspective as basic planning principles of the plan. The dominance of squares, the hierarchy of street network and large urban blocks shape harmonious relationships between morphology and urban form. Regarding the built space, the 2-floor private houses are freely arranged inside the plots, which are equally distributed in each urban block.

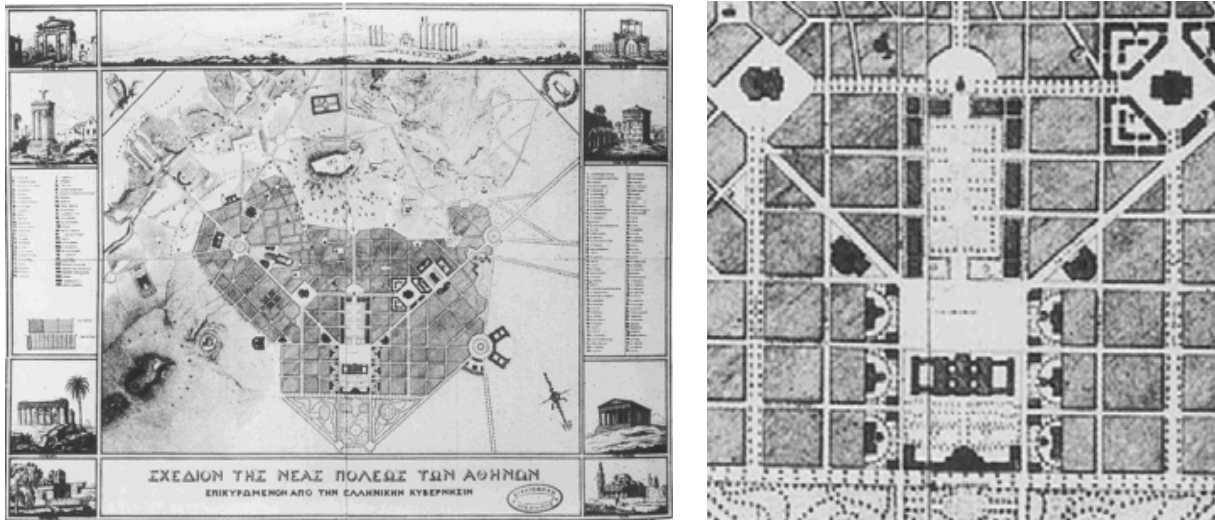


FIGURE 2 Left: The first masterplan of Athens by Kleanthes and Schaubert. Copy of 1836. Right: A segment of the same plan illustrating the layout of urban blocks. The influence of the European tradition is obvious in the proposed plan. Symmetry, geometry and perspective are the basic principles of the layout.

## THE URBAN BLOCK DURING THE BEGINNING OF 20TH CENTURY (UNTIL 1922)

After the Balkan wars (1912 – 1913) Greek State had to integrate the ‘New Lands’ (Νέες Χώρες)<sup>9</sup> to ‘Old Greece’ (Παλαιά Ελλάδα). The governments of Venizelos continue to modernise and reform policies and practices in spatial, legislative, institutional and city planning level. The interventions for upgrading the urban environment of cities in the New Lands displayed a “systematic state intervention in the urban space”.<sup>10</sup> The Ministry of Transport and the Office of Eastern Macedonia Reconstruction (OEMR) headed by architect John William Mawson (son of Thomas Mawson) were established in 1914 and in 1919 respectively.

The proposed plans of the residential areas were influenced by the idea of the garden city. The experience of the garden city was incorporated in the plans by the British architects, which were among the staff of the OEMR, as documented by Kafkoulia<sup>11</sup>. Planning is based on several design tools; organic street network, polygonal urban blocks with curved sides, equal land distribution, buildings in rows facing the street and the predominance of open space inside the plots. Unfortunately the reform effort of the program was interrupted due to several causes, such as: the electoral defeat of the Liberals in 1920, the influx of refugees from Russia, the continuation of the Asia Minor Campaign and economic decline<sup>12</sup>. In the end only one proposal was built under the program of the Eastern Macedonia Reconstruction: the settlement of Nea Hrakleia - Tzoumagia. The layout has a uniform morphology influenced by western European suburbs in a quite simpler form.

The case study of this period is the reconstruction plan of Thessaloniki after the fire of 1917, which destroyed 120 hectares of the center. As a result it lost its traditional and irregular layout of the Ottoman period. The fire was a historical turning point for the city and the following plan was a major project of European urbanism of the 20<sup>th</sup> century. The Greek Government created the International Planning Committee (architects: Eduard Mawson, Ernest Hébrard - director, Aristotelis Zachos, Konstantinos Kitsikis, engineers: Aggelos Gkinis, Joseph Pleyer, Thomas Mawson as consultant architect and the Mayor of Thessaloniki Kontantinos Aggelakis) to prepare the new plan of the city. The reconstruction’s goal was to modernise and reorganise the city by applying dominant European planning principles and design tools and by eliminating the irregular and chaotic system of the neighbourhoods and the organic street network (remnants of the Ottoman period).

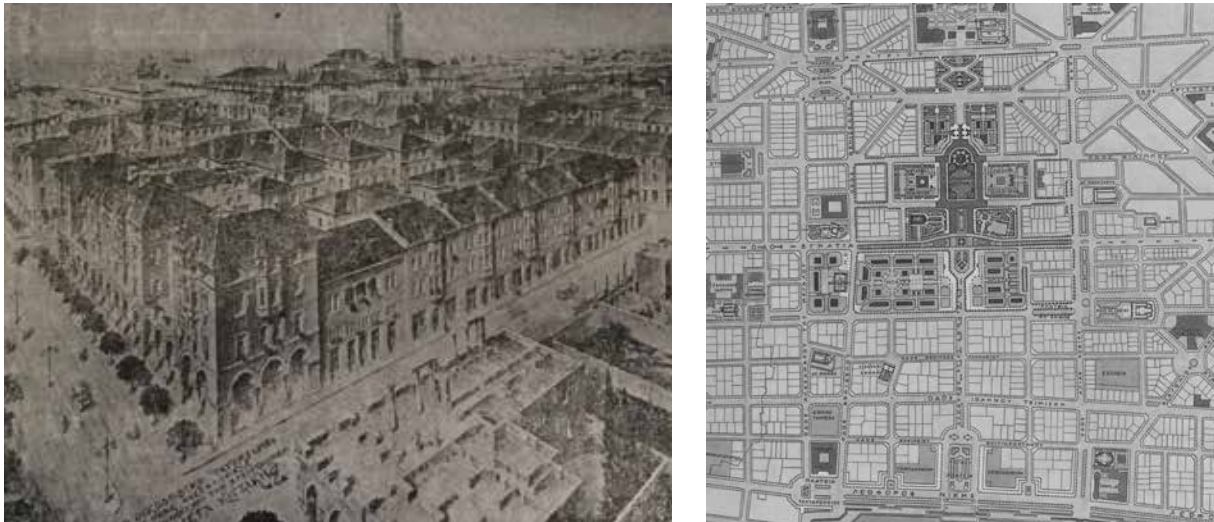


FIGURE 3 Left: Study on a continuous urban block by the architect Kostas Kitsikis published in 1919. The proposed form of the blocks illustrates the importance of urban housing in the city due to their volume and architecture. Right: A segment of the proposed plan in Aristotelous area showing the symmetrical layout and the orthogonal urban blocks.

Hébrard and his team created a layout by using the urban block in a repetitive orthogonal urban grid as the core element of the plan's composition. Yerolymbos notes: "this rectangular grid pattern was framed by a system of diagonal roads, entirely within the spirit of classical French urban layouts, though in this case loosely and sensitively plotted".<sup>13</sup> Hierarchy of the street network, classical engravings, functional zoning (mixed-use was allowed in the centre), connection of historical monuments with footpaths, consecutive monumental squares and free open spaces for recreation are the main characteristics of the plan. Regarding plot distribution the plan required expropriation of land from 4.000 owners for further exploitation. The implementation of the new plan required, firstly, the total expropriation of the burnt area and secondly, auctions of the new plots under special conditions. Private ownership continued to be the most important mechanism of urban development in Greece. The Decree of 1920 "On implementation of the new plan of Thessaloniki"<sup>14</sup> introduced specific regulations for the form of the urban blocks and the buildings. Urban blocks could be built with either a continuous system (see figure 3) or a mixed system regarding facing the street. The inner open space should be non-continuous and the vacant open spaces could be unified in order to create communal courtyards. Urban housing should be a maximum of three floors with two to four rooms per apartment.

## THE URBAN BLOCK DURING THE INTERWAR PERIOD (1923 - 1940)

In 1923 the Treaty of Lausanne defined the Greek boundaries whereas another separate agreement decided the obligatory exchange of populations between Greece and Turkey. The refugee settlement was the beginning of an important chapter regarding the evolution of urban development. The inflow population exceeded the 22%<sup>15</sup> of the residents in Greece and the 50% of them settled in urban areas. The following years were defined by rapid urbanisation and intense transformations of the urban space. The urban population from 9,7% in 1920 reached 14.5% in 1928.<sup>16</sup>

The Greek state, due to continuous housing needs, approved several policies in order to facilitate the construction of buildings, such as property expropriation, building cooperatives, horizontal property etc. Unfortunately the inadequate housing for the refugees was the engine of illegal construction of buildings and cities continued to grow gradually integrating these areas. All of the refugee settlements defined the urban expansion of the cities (e.g. Athens, Piraeus, Thessaloniki, Serres, Kavala) in a great extent. The main planning principles of the new plans were fast urban development, easy land distribution and mass construction of housing. Thus the orthogonal grid was chosen as the basic design tool, which ignored completely the topography of the sites.



FIGURE 4 A segment of the cadastral map of Toumba, a typical refugee settlement in Thessaloniki, 1934. The map shows the orthogonal layout of compact small urban blocks, the equal distribution of plots, the rudimentary hierarchy of streets and the absence of public open spaces.



FIGURE 5 The masterplan of Filothei probably by the architect Nikolaos Zoumboulidis, approved in 1934. Right: A segment of the same plan. The urban blocks are compact, small and sometimes curved.



FIGURE 6 A typical continuous urban block dominated by the building typology of polykatoikia. The caption is at Agiou Dimitriou Street, in Thessaloniki.

Other planning instruments were compact small urban blocks, a rudimentary hierarchy of streets, several typologies of houses (the dominant type was the detached house with a small garden) and equal small plots (see figure 4). The street played an important role for creating small neighbourhoods, as it formed an urban sustainability of the space.

Along with the refugee settlement, the urban space in Athens extended to the northeast suburbs by private housing settlements of medium and high incomes, which “doubled the area of Athens”<sup>17</sup>. These settlements are divided in two categories, the first category refers to projects by construction companies with the available capital or bank support and the second refers to cooperative settlements. During 1923-1929 seventeen suburb settlements were established, such as Psyxiko (1923), Kalogreza (1925), Ilioupoli (1928) etc. and during 1929 – 1926 ten cooperative settlements were approved, such as Neo Psyxiko (1929), Filothei (1933), etc.<sup>18</sup> All of the plans were influenced by design layouts of garden cities in a simpler form.

The chosen case study is the “garden city of Filothei” (or New Alexandria) due to the historical fact that it “was the first mass construction of housing in Athens during the interwar period from non-state actors”.<sup>19</sup> The settlement of Filothei intended to be built for the employees of the National Bank. The masterplan probably made by the architect Nikolaos Zoumboulidis was approved in 1934<sup>20</sup>. The plan illustrates a garden city, but with a relative regularity and a medium density. The urban blocks are compact, small and sometimes curved (see figure 5). In addition, the plan illustrates a non-hierarchical street network, whereas the green spaces seem to adjust to the plan without any principle. Kafkoula notes that the plots were relatively large (1300 – 1500 sq. m.<sup>21</sup>). Finally, the houses were designed according to several alterations of existing typologies and built in a free layout.

## THE URBAN BLOCK IN THE POST-WAR CITY DURING 1950S AND 1970S

After the Second World War and the Greek Civil War (1946 – 1949) Greece faced financial vulnerability and massive concentration of population in cities. Due to high unemployment rates and the lack of housing and capitals, the ‘reconstruction’ mechanisms of the Greek state had to provide economic development and to improve the living standards. The existing goals for industrial development were abandoned and instead the construction of buildings became the “lever of the economical life”<sup>22</sup>. Although the state managed to implement programs of social housing complexes during 1960s, the result was not satisfying<sup>23</sup>. Private initiative in the reconstruction process and the individual plot continued to prevail and dominate in the urban transformation of the cities.

The Law 3741 “On the ownership by floors” of 1929<sup>24</sup>, which introduced the building mechanism known as antiparochi and later the Building Codes (ΓΟΚ) of 1955 and 1973 managed to exploit the maximum of the available plots without any proper management at urban level. The emergence of the typology of polykatoikia illustrated a new massive form of housing in the modern city. The new masterplans continue to display the orthogonal layout of the street network and the urban blocks without any regulations for the buildings. Construction of buildings on the other hand strictly follows the Building Code, which was and still is the unique design tool for the Greek urban space. Filippidis notes that, “planning has been used as a tool of political expediency rather than a tool of space configuration.”<sup>25</sup>

The new blocks are compact and continuous (see figure 6). The low-rise houses (see for example refugee settlements) are replaced with higher buildings, which follow standardization practices and a repetition of basic architectural patterns, far away from aesthetics and harmony. A typical characteristic of the polykatoikia is the balcony in order to connect with the external space. The vacant open space in the plot is actually a small area ensuring minimum ventilation and amount of daylight inside the apartments. The urban block lost its high quality of urban environment and its original social character.

## CONCLUSIONS

Urban block has clearly been the basic planning unit of urban form in Greek cities since the establishment of the Greek State in 19<sup>th</sup> century. During the first examined period (neoclassic city of 19<sup>th</sup> century) the repeated use of the orthogonal grid in order to reflect rationality, regularity and modernisation led to a uniform layout of urban blocks and street network. The example of Patra showcases a characteristic proposal of an organised built space without land segmentation. In contrary, during the Ottonian period the new laws and regulations together with the new proposed plans dealt for the first time with plot distribution. The first masterplan of Athens by Kleanthes and Schaubert influenced by European urban layouts displays an important moment for neoclassical planning with large urban blocks and a clear hierarchy of streets.

Regarding the beginning of 20<sup>th</sup> century, the Greek state tried to solve the emerged problems due to the integration of the New Lands with an ambitious program of Eastern Macedonia Reconstruction. The proposed plans with organic layouts, irregular urban blocks and predominance of open space, influenced by the ideas of garden city, had great potentials for the development of the specific area. Furthermore, the plan of Thessaloniki after the fire of 1917 proved to be a highly important opportunity to reorganize the city. Until 1917 the main components of the urban fabric were the street and the neighbourhood, in the new plan the role of the organisation tool goes to the continuous urban block.<sup>26</sup>

During the interwar period Greece faced the most crucial social upheaval in its modern urban history. Due to the urgent need for fast development of urban housing the refugee settlements were planned with only basic design tools, such as the orthogonal urban grid, compact urban blocks, equal small plots, typologies of houses

and rudimentary hierarchy of streets. However, the plans were not as sophisticated as for example the plans of the previous examined periods, but managed to create a high quality of urban environment and an appropriate balance between built and open space. Concerning the suburbs extension in Athens both settlement categories (projects by constructing companies and cooperative settlements) illustrate simpler forms of garden cities with organic layout, relatively compact urban blocks and large plots.

Finally, the urban block in the last examined period of the study (post-war city during 1950s and 1970s) dominates the morphology of Greek cities until today. The building mechanism of antiparochi, the importance of the individual plot and the polykatoikia transformed the urban blocks to large volumes of built space defined by the current Building Code. The street lost its social character and the built space failed to connect with the urban environment.

Last but not least, it is worth mentioning that city planning in Greece has never been a strategic tool that prevented problematic situations, but it became just the opposite, the result of social and economic changes, which have influenced the configuration of the urban space in a great extent. Although the Greek State managed to make proposals for reorganization, upgrading or reconstruction of urban space, they unfortunately remained theory. Many of the described case studies were not realised in their initial proposed form but had been continuously altered for many years (e.g. Athens).

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### Disclosure Statement

I have no conflict of interest to declare.

### Notes on contributor

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- Figure 2: Kostas Mpiris, in Greek: Κώστας Μπίρης. Αι Αθήνα από του 19ου εις τον 20ον αιώνα (Αθήνα: Μέλισσα, 1999), 36.
- Figure 3: Left: Kostas Kitsikis, in Greek: Κώστας Κιτσίκης. Η Κτιριολογική Αποσις του Νέου Σχεδίου της Θεσσαλονίκης (Αθήνα: Αδελφοί Μπλαζουδάκη, 1919), i. Right: Thessaloniki Department of the Cartographic Heritage Archives of General State Archives of Greece.
- Figure 4: Thessaloniki Department of the Cartographic Heritage Archives of General State Archives of Greece.
- Figure 5: Personal archive of Kyriaki Kafkoulia.
- Figure 6: Photograph made by the author.

## Endnotes

- 1 The central location of Athens, its long history and cultural heritage are the main causes that Athens was declared as the new capital in 1834. Before 1834 Athens was a village of 4.000 inhabitants and until the end of the period under examination (1907) has 165.000 as documented by Loukakakis.
- 2 Alexandra Karadimou – Yerolymbos, in Greek: Αλεξάνδρα Καραδήμου - Γερόλυμπου, Καταβολές και εξέλιξη της νεότερης ελληνικής πόλης. Πόλεις και πολεοδομία του ελληνικού κράτους ως το 1940. (Θεσσαλονίκη: Τμήμα Αρχιτεκτόνων Α.Π.Θ., 2003). 41.
- 3 Thirty years later (1860) Ildefons Cerdà proposed his extension plan of Barcelona based on the same principle.
- 4 Vilma Chastaoglou – Martinidis, “City Form and National Identity: Urban Designs in Nineteenth-Century Greece”, *Journal of Modern Greek Studies* 13 (1995): 108
- 5 Dora Monioudi - Gavala, Πολεοδομία στο Ελληνικό Κράτος 1833-1890. (Αργίριο: Τμήμα Διαχείρισης Πολιτισμικού Περιβάλλοντος και Νέων Τεχνολογιών, Πανεπιστήμιο Δυτικής Ελλάδας, 2012). 17.
- 6 In Greek: Β.Δ. 3 Απριλίου 1835 “Περί υγιεινής οικοδομής των πόλεων και χωρίων” ΦΕΚ 19/Α/15.05.1835
- 7 Karadimou – Yerolymbos, Καταβολές και εξέλιξη της νεότερης ελληνικής πόλης. 47.
- 8 Kleantes and Schaubert were inspired by the plans of Versailles and Karlsruhe, where the palace is located in the top of the triangle.
- 9 The New Lands are the following territories: a big part of Macedonia, southern Epirus, islands of North and East Aegean and Crete.
- 10 Emmanouil Marmaras, in Greek: Εμμανουήλ Μαρμαράς, “Ελληνική πόλη και μοντερνισμός. 1900-1940.” In Η ιστορία της ελληνικής πόλης, edited by Αλέξανδρος - Φαίδων Λαγόπουλος (Αθήνα: Ερμής, 2004), 390.
- 11 Kyriaki Kafkoulia in Greek: Κυριακή Καγκούλα, Η περιπέτεια των κηπουπόλεων. Κοινωνική και περιβαλλοντική μεταρρύθμιση στην Ευρώπη και την Ελλάδα του 20ού αιώνα (Θεσσαλονίκη: University Studio Press, 2007). 263.
- 12 Kafkoulia, Η περιπέτεια των κηπουπόλεων, 280.
- 13 Alexandra Yerolymbos, “Thessaloniki (Salonika) before and after 1917. Twentieth century planning versus 20 centuries of urban evolution”, *Planning Perspectives* 3 (1988): 155
- 14 In Greek: Β.Δ. 8 Μαΐου 1920 “Περί εφαρμογής του νέου σχεδίου Θεσσαλονίκης” ΦΕΚ171/Α/31.07.1920
- 15 Karadimou – Yerolymbos, Καταβολές και εξέλιξη της νεότερης ελληνικής πόλης, 116.
- 16 Pavlos Loukakakis, in Greek: Πάυλος Λουκάκης, “Αθήνα 1830-1840: Ιστορικές φάσεις παγίωσης του υπερσυγκεντρωτισμού της”, in Νεοελληνική πόλη: Οθωμανικές κληρονομίες και Ελληνικό κράτος, τ. Α', Αθήνα 26-28 Σεπτεμβρίου 1984, Ερμούπολη 29-30 Σεπτεμβρίου 1984, 85-96. (Αθήνα: Εταιρεία Μελέτης Νέου Ελληνισμού, 1985).93.
- 17 Kafkoulia, Η περιπέτεια των κηπουπόλεων, 324.
- 18 Ibid., 311, 348.
- 19 Ibid., 354.
- 20 The plan is unsigned. See for further details Ibid., 352.
- 21 Ibid., 354.
- 22 Dina Vaiou, Maria Mantouvalou, and Maria Mavridou, in Greek: Βαΐου, Ντίνα, Μαντούβαλου, Μαρία, Μαυρίδου, Μαρία. “Η μεταπολεμική Ελληνική πολεοδομία, μεταξύ θεωρίας και συγκυρίας”, in Η πολεοδομία στην Ελλάδα από το 1949 έως το 1974. (Βόλος: Πανεπιστημιακές Εκδόσεις Θεσσαλίας, 2000). 31.
- 23 These complexes were not integrated in the urban fabric and led quickly to social exclusion.
- 24 In Greek: Ν 3741/1929 “Περί της ιδιοκτησίας κατά ορόφους” ΦΕΚ 4/Α/09.01.1929
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- 26 Nikos Kalogirou, in Greek: Νίκος Καλογήρου, “Τα συστατικά στοιχεία του αστικού τοπίου στη Θεσσαλονίκη: Συνέχεις και ασυνέχειες”, in Η Θεσσαλονίκη: επιστημονική επιτηρίδα του Κέντρου Ιστορίας Θεσσαλονίκης του Δήμου Θεσσαλονίκης, Vol 1 (Θεσσαλονίκη: Κέντρο Ιστορίας Θεσσαλονίκης, 1985). 563,567.



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# COMPARATIVE ANALYSIS OF URBAN MORPHOLOGY FOR OTTOMAN STYLE CITIES IN TURKEY AND NORTH AFRICA

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Urban fabric refers to an environmental level normally associated with urban design. It comprises coherent neighbourhood morphology (open spaces, building) and functions (human activity). Practically urban fabric develops according to different patterns, though the original style is the main factor, which defines its characteristics. During the 16th and 17th centuries, in particular at the height of its power under the reign of Suleiman the Magnificent, the Ottoman Empire was a multinational, multilingual empire controlling much of Southeast Europe, Western Asia, and North Africa... many cities were constructed in this period displaying many commune characteristics of Ottoman style. This study aims to compare different cities of the same style basing on the analysis of urban graph theory network analysis and centrality indices, in order to observe clearly the dissimilarities of their urban fabrics. In this research we use data from three different cities of the Ottoman style, grown under different circumstances; Izmir, south Turkey, Algiers, Algeria a littoral city in north Africa and an interior city, Constantine, Algeria in north Africa, materials and methods for this study was described as well. The results indicate that the observed results from the statistical analysis weren't enough to finish by clear indices of urban comparison, so another solution was driven to deal that issue. The functional forms derived in the paper suggest that North Africa cities' street networks can be most characterized by large dimensions of blocks, bigger difference from the orthogonal network patterns. These features are pointed out many times in the original models of Turkey as reference. The contribution of the present analysis does not lie only in confirming quantitatively the well-said features, but in the success in shaping the elements of main features by applying GIS, ArcGIS Urban Network Analysis toolbox indexes for centrality indices calculation and network analysis indices.

## Keywords

Comparative Analysis, urban morphology, network analysis, ArcGIS, centrality indices.

