Urban Futures - Cultural Pasts

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INTRODUCTION

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Every region of the world has its particular cultural, social and artistic heritage. In urban centres this is at its most pronounced, with the places we live in being the result history – a history of artistic visions, social and cultural forces, planning initiatives, and engineering projects. As UNESCO points out, in thinking about the future of any given place, we are obliged to build on its past and its present. A city and its cultural life then, are living questions – past, present and future.

This means that when discussing the history and future of specific sites we must think broadly. We have to understand the local and the global context in we live: the transnational forces of globalization, the growing importance of culture and tourism, the worldwide trends of heritage and consumerism, the universal concern for sustainability etc. In this regard too, a city, a region or a site are all complex entities – questions of specific responses to global issues. The host city of this event, Barcelona, and by extension the whole region of Catalonia, is a perfect example of this and in addressing the questions and issues typical of the Catalonia region, the conference from which these proceedings come, sought debates relevant to Barcelona but also cities the world over.

Across the Mediterranean issues of sustainable futures are paramount. In Europe more widely, the gentrification of traditional neighborhoods is endemic. In North America and Australasia the respect for Indigenous cultures and crafts is urgently needed. In Africa and Asia, how to sustainably design for growth in existing contexts is a pressing problem. In Latin America and the Middle-East, development that avoids the homogenizing forces of globalization is vital. In these contexts the papers included in this publication will all explore how such interchangeable global issues are key to our pasts, but also to our sustainable futures.

TABLE OF CONTENTS

GATESHEAD RIVERSIDE PARK: PUBLIC ART AS URBAN HERITAGE AND COMMUNITY FUTURE

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INTRODUCTION

Divided from (or connected to) the larger city of Newcastle by the once highly industrialised River Tyne, the town of Gateshead in the north east of England is an unlikely candidate to be the birthplace of cultural regeneration in the UK, but a case can be made. The town grew rapidly throughout the industrial revolution in the late 19th and early 20th century – with industries typically associated with shipbuilding, ropemaking and coal-mining. Today this once dominant and proud industrial history is marked by the historic Dunston Staithes (Fig.1). Thought to be the largest still-standing wooden industrial heritage structure in Europe, this was the place where the trains from the coal mines used to run along to load coal directly onto ships plying the river. However, it now stands as a heroic ruin to this industrial heyday, damaged by the elements and a series of fires.

Figure 1. Dunston Staithes (photo: Peter McDermott)

Experiencing the economic and social impacts of post-industrial decline, in the late 1980s Gateshead embarked on what is now a typical path of cultural regeneration, hosting the National Garden Festival in 1990 (a Conservative Government initiative to transform the economies and identities of declining places), converting the former industrial BALTIC flour mill into a contemporary art gallery (2002), and constructing the landmark Sage Gateshead (2004; now The Glasshouse International Centre for

Music) and the ingenuously engineered Millennium Bridge (2001). Gateshead is probably best known for Antony Gormley's emblematic sculpture *Angel of the North* (1998), itself embodying a phoenix-like rise from a former coal site, and yet what is less known is the pioneering and forward-thinking scheme of public art that gave the Council of this small town the confidence to embark on what was to be an era-defining scheme.

The site of the Garden Festival and much public art within Gateshead's Riverside Park has since been physically neglected but is now itself subject to regeneration – one which attempts to pioneer an approach that counteracts the negative repercussions of its cultural regeneration origins. This paper uses this site to consider public art as heritage and uses public art processes to consider the learning that could inform a different approach to cultural and creative regeneration.

CULTURAL REGENERATION AND THE 1990 GATESHEAD GARDEN FESTIVAL

The iconic bridges and major cultural buildings that punctuate Gateshead's quayside have dominated the narrative of cultural regeneration for which the conurbation of Newcastle-Gateshead has become renown.[1] This, along with the pursuit of mega-events like the Garden Festival makes it tempting to place it within narratives of what has become known as the Barcelona model or Bilbao effect.[2] It followed Glasgow who hosted the Garden Festival in 1988 and two years later somewhat unexpectedly gained the accolade of European City of Culture. Within both urban regeneration and Garden Festivals, public art came to play a prominent role. The use of public art chimed with the broader Conservative urban programme that sought to tackle the social and economic problems associated with inner cities – public art was vaunted as being able to make urban areas more attractive areas to live, work and invest, and to be able to draw out characteristics of identity therein instilling local pride. The zeitgeist saw the emergence of a plethora of public art agencies that arose to support the implementation of public art as part of regeneration, and the Arts Council of England launched a percent-for-art campaign in the 1990s, calling for 1% of development costs to be devoted to public art.

The UK Garden Festivals drew on the German 'Bundesgartenschau' model but whereas in Germany the focus was on horticulture and landscape design, in the UK the overriding drivers were economic regeneration and land reclamation. For example, in Gateshead between 1985 and 1990 over 80 hectares of old railway lands, gas works, tar and coke works were reclaimed and over 2 million new trees and shrubs planted. Public art had featured at all previous Garden Festivals (Stoke, Liverpool and Glasgow), unsurprising as the guidelines that Festival companies followed advised: "the exhibits must be examples of good landscape design and horticultural excellence, and should incorporate provocative, challenging and culturally relevant displays of public art."[3] Curator Isabel Vasseur had been brought in to curate Glasgow's public art at a relatively late stage of planning, and she returned for Gateshead to curate the extensive 'Festival Landmarks' exhibition with works by local artists sited alongside those by internationally renowned practitioners (see Figs. 2-3). In total seventy artworks were displayed across the site as part of this programme, some created specifically for the Festival, with others being brought in as pre-existing works. While most of the artworks were only on site temporarily as part of the event this amounted to a huge display which, along with Festival itself, was intended to be seen as catalyst for broader regeneration within the town and the wider region.

Figure 2. Reclining Woman (Dhruva Mistry, 1986), at Gateshead Garden Festival 1990 (photo: Donald McCrae).

Figure 3. Le Diable (Niki de Saint Phalle, 1985) at Gateshead Garden Festival 1990 (photo: Public Art Research Archive, Sheffield Hallam University).

Cultural narratives that trace a lineage from the Garden Festival and its public art to the landmark cultural buildings of Gateshead Quays fail to recognize, however, the importance of a pioneering *preceding* public art programme, in which can be read the *attitude* that informed the creation of Gateshead Riverside Park. For Gateshead is the site of one of most historic and long-running public art programmes in the UK. While in the 1980s Gateshead was undoubtably suffering significant post-industrial decline, it was also a place which held strong cultural ambitions – much of this driven by the innovative partnership formed between (the local authority) Gateshead Council and Northern Arts which was at the time the most active and innovative of England's ten regional arts associations. One way in which Gateshead felt it could project its cultural ambitions was through public art.

PIONEERING 'ART IN PUBLIC PLACES'

While the 1990 Garden Festival remains a key turning point in Gateshead's cultural regeneration journey, the story of Gateshead's public art ambitions can be traced back much further, to a conference organized by Northern Arts at Gateshead's Caedman Hall in May 1984.[4] Here over 100

participants, drawn from across the region's arts, local authority, and higher education sectors came together to discuss the latest innovations in public art commissioning and to celebrate a series of public art projects recently launched within the town. These included: Keith Grant's mosaics for Gateshead Metro Station, installed 1982-3 as the first artworks commissioned for Tyne & Wear's 'Art on Transport' programme; Richard's Harris's sculpture *Bottle Bank* – which at this time was just starting construction on Gateshead's Riverside as the *de facto* entrance to Gateshead Riverside Park (see Fig.7.); and another 'environmental' artwork being built on former slag heap at Gateshead's Windy Nook by Richard Cole. Both Harris' and Cole's works would be completed two years later, in 1986 – the year in which Gateshead Council formally launched its 'Art in Public Places' programme.
Internally, within the Council 'Art in Public Places' was supported through a pioneering alliance between the local authority's Art, Libraries and Gallery Committee and the city's Planning Department. Most importantly, this support was also matched by the appointment of a specialist council officer to develop and deliver the public art programme – Anna Pepperall. Originally joining the Council as a member of the Arts Team, Pepperall would go on to manage and curate the public art programme at Gateshead Council for the next thirty-three years, from the early days of commissioning for Gateshead Riverside Park, through to delivery of the *Angel of the North*, the opening of BALTIC and the Sage Gateshead, and projects beyond.

Figure 4. Gateshead Family Sculpture Day (photo: Newcastle Chronicle)

Early activity supported under the umbrella of the 'Art in Public Places' programme was focused on community facing activity, including neighborhood-based commissions and artists' residencies in schools and health care centers. Key moments included: the launch, in 1985, of 'Gateshead Family Sculpture Day' (Fig.4.) a highly popular participatory sculpture-making event, facilitated by local artists, which was run annually until 2019; the installation of Neil Talbot's life-size ceramic relief *Victorian Baker's Shop* in Carlisle Street in Felling and the appointment of a town 'sculptor in residence' Mike Winston whose sculpture *Sport's Day* (featuring figures from the fable the 'Tortoise and the Hare' as shown in Fig.5.) the sculpture was carved in-situ on West Street, Gateshead, from massive block of polystyrene which was then covered in a skin of concrete. (Still in place, and now painted a solid matt black, the sculpture was originally painted in vivid rainbow colours.).

Figure 5. Sports Day (Mike Winston, 1986), Gateshead (photo: Rebecca Farley)

Throughout this period, external partnerships were vital to the vision and delivery of public art in Gateshead – Northern Arts were a vital partner in terms of 'seed funding' and support for artists' commission fees – but also through building relationships with the training and employment schemes of the Manpower Services Commission (set up to develop a comprehensive manpower strategy for Britain)[5] and with the local business community to support physical delivery – a process of collaboration that was especially important for some of the early Riverside Park artworks.

GATESHEAD RIVERSIDE PARK

Located on a stretch of former industrial land on the west of the Tyne Bridge and opposite Newcastle's Quayside, Gateshead's riverside had long been identified by the Council as a candidate for urban re-greening – in this case, as a new inner city 'sculpture park' and 'art venue': a place in which to bring contemporary art to a new public. Following decades of industrial clearance and land reclamation work undertaken along this area of riverbank in the 1960s and '70s, in the ten years between 1990-2010 at least thirteen major sculptures and contemporary gateway art features would be permanently installed in Gateshead Riverside Park (see map, Fig.6.).

Figure 6. Interpretation map showing locations of artworks in the Park (image: Gateshead Council).

Perhaps surprisingly, given its urban location, the curatorial ethos for the new sculpture park was highly influenced by work happening at that time in Grizedale Forest over in Cumbria in the North West of England (a region which was also then part of Northern Arts' geographic remit). Indeed, several of the artists commissioned for the first phase of artworks for the new Riverside Park in the 1980s and 90s had already worked at Grizedale. These included Richard Harris, creator of Gateshead's *Bottle Bank*, who was one of first artists in residence in the Forest. While similar in form to some of his work in Grizedale, in Gateshead Harris swapped his forest palette of found slate and fallen wood for more urban architectural materials, to create an architectural-scale curving walk-through sculpture built of dressed stone blocks and steel arches (Fig. 7.). The steel itself was provided by British Steel while stone was sourced from the demolished Old Harbour Master's house at North Shields. *Bottle Bank* was the first artwork commissioned for Gateshead's Riverside and one of the Gateshead public artworks which was constructed with help from Manpower Service Commission employment scheme trainees.

Figure 7. Bottle Bank (Richard Harris, 1986), Gateshead (photo: richardharrissculpture.co.uk)

It is interesting to note that this relationship with youth training schemes was also an approach taken by the Blackness Public Art programme in Dundee, which was launched around the same time as Gateshead's 'Art in Public Places' programme. As well as helping local skills development, the

Manpower Services contribution was doubly important because Gateshead had no substantial budget for public art at this time. While Northern Arts was able to provide some financial support in terms of artist's commission fees, costs for labour and materials were largely funded through environmental improvement budgets rather than from 'Arts' money *per se*.
As reported by Lionel Hehir, Gateshead's Environmental Improvement Officer at the time (in his presentation to the 1984 Caedman Hall conference), the steeply sloping *Bottle Bank* site was a difficult place to work with – the project requiring Harris to collaborate closely with the landscape architects designing the new Riverside pathway, and with structural engineers on his plans for the steel frame, as well as with the team of Manpower Service Commission trainees employed to construct the stonework – a process which would prove to take much longer than initially planned. Although since decommissioned to make way for the building of the Hilton Hotel, Harris' *Bottle Bank* is still regarded as an emblematic work for Gateshead, marking the start of the town's engagement with public art commissioning – way before the advent of the Gateshead Garden Festival and the arrival of Antony Gormley's landmark *Angel of the North* (1998).

Figure 8. Rise and Fall, Gateshead Riverside Park (photo: Rebecca Farley)

However, it was only after the delivery of the Garden Festival that the development of the Riverside as an urban 'sculpture park' really began to gather pace. Permanent artworks (all still in-situ) that would follow Harris's inaugural 1984-86 commission include: Colin Rose's *Rolling Moon*, originally created for Glasgow Garden Festival but relocated here in 1990; Andy Goldsworthy's steel-layered *Cone* (1992); a family of scrap metal *Goats* by Sally Matthews (reflecting the theory that the place name 'Gateshead' derives from 'goat herd'); *Once upon a Time*, by Richard Deacon (1992) set on the abutment of the demolished Old Redheugh Bridge; and Lulu Quinn's (once) illuminated *Rise and Fall* (Fig.8.) referencing nearby bridge architecture but also the cycle of 'boom and bust' industrial history that has defined the former character of Gateshead.

Gathered together in a relatively small geographic area, this 'Urban Grizedale'[6] built on the earlier history of public art in Gateshead – residencies, temporary and permanent commissions; in the transference of the practice from the rural Grizedale Forest to post-industrial Gateshead, the willingness to push the boundaries of contemporary practice; and in its use of adjacent budgets and funds, the adeptness to work differently to make things happen. It was arguably this experience, with the Garden Festival amidst it, that gave Gateshead Council the confidence to go on the more recognized path of urban cultural regeneration of which Gormley's *Angel* is now emblematic.

PUBLIC ART, HERITAGE AND REVISITING REGENERATION

Due largely to local authority spending cuts and lack of maintenance, by 2021 Gateshead Riverside Park had fallen into disrepair and the sculpture trail was in poor condition. Situated in an urban woodland, the trees had overwhelmed many of the sculptures and the park developed a reputation for anti-social behaviour. Successive regeneration attempts to improve the area had failed or their interventions were not sustained. In 2017 a project called Newcastle City Futures, orchestrated by Newcastle University, brought together a multi-disciplinary and cross-stakeholder group to consider the future of Gateshead Riverside Park.[7] There was no money on the table, simply a collective recognition of the potential of the site and its importance. Key lessons from previous regeneration attempts highlighted the lack of community ownership and engagement – typical of large-scale culture-led regeneration initiatives, and therefore these became the driving force underpinning a new approach.

Engaging local communities with the nature and heritage of the site, and the plans for its future, has been at the heart of the Gateshead Riverside Park and Tyne Derwent Way projects led by Gateshead Council with Newcastle and Northumbria Universities, the National Trust, and the Tyne and Wear Building Preservation Trust. A broader stakeholder group involves a significant body of local charities, businesses and community groups. Gateshead Council has successfully secured Community Renewal and Shared Prosperity Funding (part of the recent Conservative Government's 'Levelling Up" agenda, geared to address geographic economic imbalances) to reimagine the Park and area around Dunston Staithes. As well as community engagement, environmental improvements and repairs to the artworks are underway in the hopes that public art might once again enliven the park and create new narratives for new generations – for example local school children, born well after the Park was created – are developing new stories about the artworks – the *Rolling Moon* and grazing *Goats* – which give them a fresh interpretation and relevance to place.

CONCLUSION

Gateshead Riverside Park, as a progenitor of the pioneering public art practice in Gateshead, and a holder and reflection of public art from the Garden Festival, is arguably the birthplace of cultural regeneration in the UK and, as such, is a significant heritage site. The experiences leading to its creation, and the importance of retaining the expertise of Pepperall, gave the Council of this small north-east town the confidence to go on to commission iconic buildings and artworks that then influenced regeneration practices across the UK – and beyond. Yet, the park's present neglected state, speaks also to the failure of many top-down, culture-led regeneration initiatives which failed to have any 'trickle down' effect, or local 'buy-in' and which lacked budgets for on-going maintenance. Learning from this, while the current initiative faces the familiar challenges of time-limited project-funding and sustaining community engagement, the ethos and values point to a very different kind of regeneration – one with public art heritage, culture, and storytelling at its core.

NOTES

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[2] Monica Degen and Marisol García, “The Transformation of the “Barcelona Model”: An Analysis of Culture, Urban Regeneration and Governance”, International Journal of Urban and Regional Research, 36(5) (2012).
[3] Andrew C. Theokas, *Grounds for Review: the Garden Festival in Urban Planning and Design* (Liverpool: Liverpool University Press, 2004), 8.
[4] “Art in Architectural and Landscape Sites” Conference, Caedmon Hall, Gateshead, May 30,1984.
[5] Patrick Ainley and Mark Corney, *Training for the Future: the rise and fall of the Manpower Services Commission,* (London: Cassell, 1990).
[6] Les Hooper, “The Urban Grizedale”, in *A Sense of Place*, ed. Peter Davies and Tony Knipe (London: Ceolfrith Press, 1984), 158.
[7] “Newcastle City Futures”, accessed August 27, 2024, http://www.newcastlecityfutures.org

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CONSIDERATIONS OF FRONTALITY AND FORMALITY IN FACADES

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INTRODUCTION

We begin around the year 1450 Alberti when re-faced eight properties in a Florentine street to create the Palazzo Rucellai. He did so as an act of architectural convenience, if not aggrandisement for his client, and it was a commercial act. Yet it can undoubtedly be interpreted as a generous civic gesture arising from a somewhat generic architectural form and type, in an ordinary street. Alberti worked inventively from minimal, economic means: the work was cheap, and the architecture, was severely constrained to a narrow zone of 400mm between building and public space. Despite this, it is a seminal work of architecture, that contributes decorum and gravitas to the humanist city.

The imperative to maximise site value against the definitive limit of ownership created the distinctive dense mediaeval urban form comprising a wall of heterogeneous facades. Property laws and urban councils set the rules. And architects continue to be faced with the challenge of addressing public space with their designs. In doing so, they are professionally obliged[1] to consider the role of architecture as both a public art, and as a contributor to and modifier of civic life, as their buildings face the city. Typical of development control bodies around the world, UK Local Planning Authorities require new designs to respect the 'back of pavement' by building a well-defined wall on the property demise line.

So the question arises - how might one design a facade with architectural integrity for today's cities?

This paper seeks to re-contextualise the question of the good facade design over and against the predominant issues of technological performance, and to reinvigorate forgotten or discarded notions of composition. It attempts to do so in a manner independent of style, such that there might emerge an approach to facade design that has visual appeal and architectural integrity.

It arises from ongoing research undertaken into the aesthetics of facade composition at Manchester School of Architecture. Frontality and formality in facades - their aesthetics - requires re-contextualisation in the twenty-first century as a subject at the intersection of technology, urbanism, art and architecture.

Methodology

This paper attempts steps towards a method for establishing a contemporary rigour in facade design.

After consideration of the kinds of buildings that presented a challenge to façade design our work settled on the urban commercial building. Where the function has relatively weak drivers for the

façade, other design parameters come to the fore. Our home city of Manchester offered examples of this able to supply principles of facade design and composition.
Following this, to test these principles they were deployed in a design studio setting, to explore the range of outcomes generated from rigorous façade design developed absent a building function.

DEFINITION

For the purposes of the research, 'façade' is the name we give to the vertical plane of a building - usually its principal public face. The definition of the word 'facade' overlaps both physical and psychological realms. To put up a facade' or 'put up a front' is something that humans do to mask, disguise, dissemble or impress another person. All of these may apply to the public-facing expression of a building. In including this definition it implies a potential disjunction between the expressive projection and the functional substance of a building. This is key to appreciating the approach here.

CONTEXTUALISATION

We might begin with a notion of the reification of universal cartesian planes from De Stijl theory, developed from its generic implications and given specificity by Portoghesi's notion of the inert wall, activated by architecture.
In human perception through our dominant horizontality of both vision and movement, it is the vertical plane that commands our attention, captured by Christian Norberg-Schulz:
'Horizontal directions represent man's concrete world of action. In a certain sense all horizontal directions are equal and form a plane of infinite extension. The simplest model of man's existential space is, therefore, a horizontal plane pierced by a vertical axis.'[2]
In urban experience, the human's encounter with buildings and their vertical projection as frontal facades they can be regarded as analogous to artistic encounters. Arnheim identifies the horizontal plane as the plane of movement, while the vertical plane is the plane of relationship - *'Being is experienced essentially as verticality.'* [3]
As for the art gallery a townscape may be considered as gallery of abutting artworks through which we move freely, until a painting arrests our attention, confronts us, and invites engagement. A certain mode of architectural encounter, particularly that experienced in dense urban settings, is therefore analogous to Arnheim's elemental art-historical encounter.

Frontality

The idea is taken forward in Pier Vittorio Aureli's interaction with the work of UK architects Caruso St John, that there is in their work '*A kind of frontality, but also a mirror-like stillness, like the steady gaze of a portrait. When you make a big building, a very strong building somehow it faces you, but it also reflects back'* [4]
This interruption to a human's gaze and movement is neither mechanical nor theoretical, but relational, and ultimately emotional. In its architectural embodiment the facade comprises constructional logic and tectonic expression, the product of a people in a place. Aureli's commentary continues: *"Above all, the wall is a cultural object that directly interferes with our social and political understanding of the city'*
In other words, whatever one may know about a city, its true essence will be evident in the expression of its public walls. This draws revived attention to the facade. This is where Alberti's Palazzo Rucellai remains instructive. Alberti himself wrote of the architect's duty to their city through the public facing aspects of their designs.

Formal Autonomy of Facades

Whether an interruption or interference or encounter it is apparent that the special wall that is the facade of the building may be considered as a cultural artefact somewhat in isolation.

In the essay 'The Chicago Frame' Rowe[5] reflects on such a disjunction seen in how the mid- and high-rise architecture of Sullivan contrasts with Wright. Whatever the scale of the architecture, for Wright the planform as a spatial realm is paramount, and the facade, though never accidental is nevertheless a consequence of the plan. Sullivan's structural frame, he notes, is not a spatial device, but rather in the service of the facade's artistic composition. It is possible to argue that the Wrightian approach of interior organisation driving external expression has held sway in architectural teaching since Rowe's essay, certainly where the conceptual approach to a project fails to contain a theory of facade design.

Considerations of character and composition emerged in the second half of the twentieth century, prompted by a growing disillusion with the Modernist project, especially as an urban endeavour. This is the thesis of Schumacher[6] who celebrates the reversal of the modernist figure-ground, the preeminent role of resultant 'continuous walls' defining the urban plane bounding public space.

It is worth mentioning in passing those architect-theorists of the late twentieth century reaching back to the composition of the humanist city, and who lie at the traditionalist end of the spectrum - architects such as Robert Stern and Leon Krier. They with Venturi and Scott-Brown and their notion of the 'decorated shed'[7] made the autonomous facade a worthy subject of study and expression.

In the modernist stream, architect Rafael Moneo's consideration on 'continuity' in cities his revival of interest in typology[8] and his elevation of construction in the conceptual framework,[9] together represented an attempt to bridge between modernism and the classical tradition.

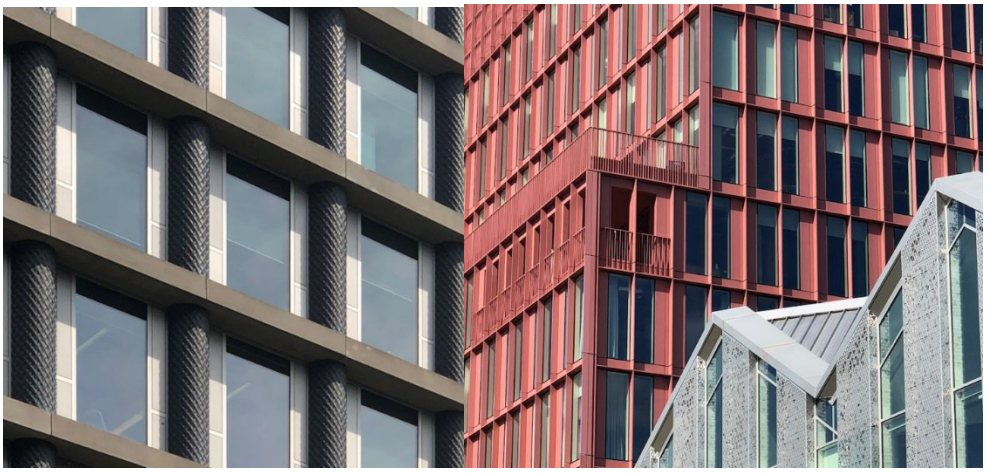

Figure 9. Tectonic expression by David Chipperfield Architects and Morris+Co at the King's Cross Development, London

Recent twenty-first century architecture across Northern Europe has seen a revival in tectonic refinement, not just in the work of Caruso St John (mentioned above), but also Sergison Bates, Morris+Co, David Chipperfield Architects (Figure 1), Lederer Ragnarsdottir Oei, Happel Cornelisse Verhoeven, Monadnock, and others. It has in part arisen out of a renewed appreciation for the tectonic theories of Hübsch and Semper, and the preoccupations of architects of 'the Other Tradition'[10] such as the work of Asplund, Lewerentz, Loos and Tessenow.

Recent research has identified there are a set the qualities of facade design that remain a popular concern for the people of a settlement, and certain qualities and types of 'complexity'[11] have been investigated to better understand the parameters for 'good design'.

None of this is to deny that a facade operates as a functional skin conditioning the internal spaces by means of environmental filters. Facade expression has always been technically contingent. However, as technology has developed the theories that informed past practice have not been re-contextualised. The contemporary bibliography of facade design is overwhelmingly tilted in this technophilic direction.[12]

Neither is it to say that facade aesthetics are of no consequence to architectural practice and criticism: quite the opposite. In the age of Dezeen and Pinterest, the immediate and superficial visual impact of buildings has arguably never been more influential. Both architect and student work demonstrate both the benefits and pitfalls of access to such fertile archives. And so Sullivan's form-based approach to the decorated box still has credence, especially in commercial building typologies. And it is this 'weak programme' typology that is instructive for the investigation of persistent themes of frontality and formality in facades.

LEARNING FROM MANCHESTER

The commercial building continued to offer a very particular architectural challenge into the twentieth century, especially for those who continue to hold to Sullivan's maxim 'form follows function'. Sullivan had no such problem with coining the maxim whilst simultaneously designing richly ornamented commercial buildings: a simple architecture of repeated floors stacked one above the other, relentlessly functional, yet given tectonic and craft expression.

In Manchester, UK, as the Industrial Revolution developed to maturity in the second half of the nineteenth century, wealth was multiplied and companies and corporations established administrative offices and warehousing in the City Centre. A reasonable question asked and answered by this explosive growth was 'what is an appropriate typology for the new architecture of commerce?'

Ancoats and beyond

Manchester is renowned for its pioneering technologies in cotton manufacturing. North of the city centre Ancoats lies what came to be called 'Cottonopolis' - now a UNESCO World Heritage Site.[13] The mills there had a distinctive, highly functional typology comprising relentlessly repetitive manufacturing floors for cotton processing, an engine shed, office block, and chimney. The latter smoky working conditions of Manchester became the defining image of the industrial city.

As manufacturing became increasingly industrialised, there quickly arose a need for warehousing. The century turned, and retail innovations such as mail order required administration teams and ready stock. Furthermore, the wealth of these new businesses encouraged to conspicuous consumption on their part when it came to architecture - unprecedented since renaissance times: *'Their monumental scale and sometimes exuberant architectural style dominate the areas of the town in which they are clustered. Nowhere else in Britain has there ever been such a concentration of buildings of this kind…'* [14]

Equally, with a requirement for openness and flexibility internally, where function suggested neither form nor fenestration those drivers for the facade composition were absent.

This paper's interest in this legacy comes from living, designing and teaching in the city. But it is the striking variety of architectural expression in the commercial architecture that prompts my research reflections today. The typology represents an opportunity to look at facade composition as a discipline detached from programmatic drivers. It is the question of how an architect presents a particular company given a generic functions of warehousing, offices, shops.

In contemporary times, the exigencies of commercial architecture require facade composition to be subservient, or at least co-ordinated with interior planning. It is self-evident that this conjunction of

facade and plan arises from the attendant planning grids and modules of a modern office fit out landscape. (The author's intention is to investigate this in subsequent work.)
Amongst weak programme architecture such as the gallery or supermarket, the multi-storey, inner city commercial building most acutely encapsulates the challenge. In other words, architects will continue to face the challenge of designing a facade without the benefit of a formative internal programme.

Warehouse Typology Façade Analysis

Our drive was to derive a rigorous, style-independent method for analysing any facade, and using the principles to synthesise new facade expressions. Analogous to Chomsky's 'deep structure' of language, it is a search for the deep structure of facade design.
Through design research, we identified four dimensions that contributed to the sense of formality and frontality in facade composition.

Figure 2. 'The Field' – the first dimension of analysis

'The Field'

This is the dominant, identifiable facade plane, which can be isolated conceptually as the 'plain plane' (Figure 2). In an imagined transformational process, it is the original wall, before openings, cornices, decoration and material variation supplemented it.

Figure 3. 'The Layer' – the second dimension of analysis

'The Layer'

These are any other planes or surfaces either in front of or behind the dominant field (Figure 3), which create architectural articulation and modelling. They may assist in creating nested hierarchies, from the facade, to the bay, to the window unit.

Figure 4. 'The Line' – the third dimension of analysis

'The Line'

These are one-dimensional linear compositional elements that subdivide fields or layers (Figure 4), traditionally comprising string courses, edgings, and similar, but which have modernist equivalents such as shadow gaps.

Figure 5. 'The Line' – the third dimension of analysis

'The Detail'

These are points or areas of visual complexity (Figure 5) such as column capitals, carved or cast components, that again have modernist equivalents in the expressive joints.

Taking the principles of the Manchester warehouse studies we can report on application and testing in teaching settings, in the following section.

Emergent Experiments in Frontality and Formality

After more than 20 years of teaching it is ever more evident that to design an architecturally rigorous facade takes approximately as long as it does to design a good plan, and it needs educated judgment. And so the paper is motivated by researching principles for facade design that are not functionally driven, but rather closer to becoming aesthetically justified.

The research tested the subject in a number of settings. Predominantly, design studio teaching in the Continuity Atelier at Manchester School of Architecture, led by the author, is the laboratory and platform for experimental design research. This work is supplemented by design courses for use in Visiting Professor duties at Poznan University of Technology (Poland) and Münster School of Architecture (Germany).

The notion of the well-composed facade is rooted in pre-modern architectural milieu. It speaks to an idea of decorum and propriety, of proportion, of ornament and detail and of visual delight. Our intention is to derive analytical and synthetical tools to apply to all expressions of architectural facade design. But it is also to leave open the possibility that modernism has abandoned aspects of value in historic facade compositional approaches.

One starting point is to use ideas of proportion as (as it were) the deep structure of the architectural expression. This approach draws us back into the field of art criticism, for there is apparently little ongoing discussion of proportion in architectural theory today. Instead a text such as Elam's 'Geometry of Design'[15] is of particular value for its function as a textbook for art and graphic composition; as such it goes some way to setting out the tools at the disposal of the composer. Applied to architecture (as in research-teaching settings) it gives readily understandable foundation in composition.

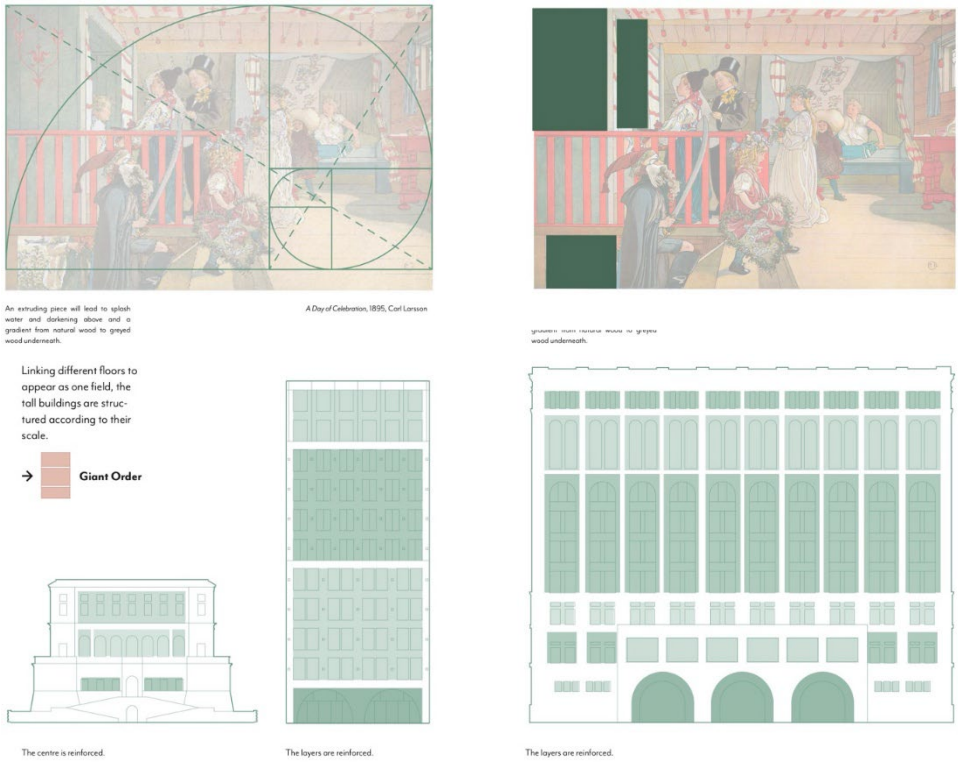

Figure 6. Analytical work on art and architectural precedents by students Bennet Tielker & Emma Fiedler of Münster School of Architecture

On our 'Function Follows Form' elective module,[16] students at Münster School of Architecture were asked to develop analytical investigations of art and graphic compositions based on Elam (Figure 6). They were then asked to consider a self-selected 'set of three' facades, linked in some way, for example, by having a common architect, a common programme, a common location, or a common material.

This analytical stage used compositional principles from the 2D applications, whilst noting that the articulation of an architectural facade offers a far greater range of expression than in a graphic design setting.

For the final submission, students were tasked with setting out their methodology, culminating in a scale plan, section and elevation of the façade, 20m high at 1:50, but of varying widths. These were then assembled into a 'street' during a grand concluding event (Figure 7).

Figure 7. Final 'street' of models (detail). Students were able to choose the material expression of their models, ranging from wood, cast concrete, cardboard and 3d printing.

This synthesis of composed facades using this system is self-evidently independent of style and function. However at the close of the final presentations, in an act of 'reverse engineering' students were invited to consider the function that might be served their facades. One student wanted no opening windows - a building that perhaps faced a motorway, ventilated from its more sheltered elevations.

CONCLUSION

By testing the analysis in a tightly restricted research-by-design setting the outcome was instructive. The application of the principles derived from façade studies resulted in a wide range of stylistic solutions, emerging from compositional and personal factors, rich and creative. The approaches reflected the character and preference of the individual student, including the material choices. On the other hand, if the students had been offered a real city street or site location, perhaps with an infill challenge (as some requested) a narrower set of contextual proposals may result.

Despite this, the compositional techniques, built up the selection and analysis of art and architectural precedents provided structured inspiration for the proposals.

Further work is intended to be undertaken on the typical parameters of commercial architecture, whose proportions and composition are functionally constrained by floor-to-floor and column grid conventions. But the results are already suggestive of a stimulating approach to achieving bold frontality and urban formality in the manner of architecture addressing the city.

NOTES

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[9] These aspects of the work of Moneo are ably expounded in Francisco González de Canales, & Nicholas Ray. *Rafael Moneo: Building Teaching Writing*. (London: Yale University Press, 2015)
[10] Colin St John Wilson. *The other tradition of modern architecture: the uncompleted project*. (London: Black Dog Publishing, 2007)
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[14] Simon Taylor et al. *Manchester - the warehouse legacy: introduction and guide*. (London: English Heritage, 2002).
[15] Kimberly Elam. Geometry of design: studies in proportion and composition. In *Design briefs* (2nd ed.). Princeton Architectural Press, (2011).
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THE MORPHOLOGICAL TYPOLOGY OF THE PRODUCING CITY: AN ATLAS OF PRODUCTION FACILITIES

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INTRODUCTION

This research addresses the challenges faced by German cities in transforming their inner-city areas due to structural changes driven by shifts from industrial to knowledge- and service-oriented economies. The study investigates the morphological typologies of production facilities by considering the spatial dimensions of production processes and existing urban structures. Through the application of clustering and spatial analysis, the research aims to identify the potential of reintegration of industrial production areas within urban contexts and their role as catalysts for creating mixed neighbourhoods that contribute to urban sustainability.[1]

Background

Experts in Germany discuss for the first time after 62 years, about the abolition of the separation of uses, which has been the legal basis since 1962 with the adoption of the Building Utilisation Regulation.[2] The interpretation of Corbusier's Charter of Athens from 1933 led to a segregation of living and working, which resulted in a process of displacement at the costs of the manufacturing industry.[3]

2007 at the Conference of the Leipzig-Charter, the discussion of a mixed-function city was taken up again to develop a response to the European goals of sustainable cities. The goals formulated in the charter are: manufacturing industry, craft businesses and corresponding jobs are to be secured or newly established.[4] Jobs should move closer to people's living environments and can therefore also contribute to reducing commuter traffic.[5] The multifunctional nature of the project is expected to have socio-economic stabilising and upgrading effects for the districts and neighbourhoods.[6] Economy and industry began research into production conditions in urban areas in various areas at an early stage. The development of renewable and low-emission to zero-emission energy sources, the 'Industry 4.0' [7] initiative for a decentralised and location- independent production process, as well as necessary adjustments in city administration and land-use planning to simplify inner-city branches, confirm the investigated option of urban production.[8]

STATE OF RESEARCH

The topic to be analysed is ambivalent due to its complexity and ramifications in various specialist areas, as well as the interaction between theoretical approaches, implemented practice and current developments.

The resumption of industry and commerce in an inner-city context was first discussed by the government and politicians in the 2016 German Sustainability Strategy[9] and introduced in a 2017

amendment to the German Building Code[10] as a new building area category "Urban Area – MU".[11] The possibility of different uses for individual storeys and a higher permissible immission guide value of 63 dB are just two of the innovations for achieving density and a mix of uses. Informational media on resource efficiency for urban production, addressed at businesses and companies, are intended to promote a feasible scenario for inner-city locations.[12]

The concept of the 'Productive City' is still in the early stages of investigation by urban and spatial researchers. The newly published research project 'New spaces for the productive city'[13] commissioned by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR), includes an inventory of the topic and an attempt at a definition. The lack of a standardised definition highlights the need for research. The similarly described intentions of the productive city to achieve sustainable effects from integrated production in urban areas are particularly relevant to society.

"*The lack of low- skilled manual work in the inner city is linked to poverty, crime, family dissolution and the social life of neighborhoods" – William Willson, 1998*[14]

"The argument is that manufacturing cannot and should not be-delinked from typically urban „knowledge-based"activities such as design and R&D. Or to put it more strongly, a manufacturing base is a necessary condition to develop and expand R&D and other high-level-services." – Willem van Winden and Leo van den Berg, 2011[15]

The Challenge of definition

The few existing studies on 'Urban Production' and 'Productive City' show a very small reference pool as a basis for investigation. Dr Nischwitz explains this in his study with the lack of a common understanding of the terms, as well as a lack of clarity in the definition.[16] Although the number of posts relating to the Productive City is not small at all. Urban Production is well defined through several publications, in the academic debate.[17] A consistent understanding of the term can therefore be assumed here.

Urban Production is a central component and a central requirement for the Productive City according to Nischwitz. Urban Production focuses on production in densely populated urban areas, that produces a physical product. So, to say: Things.[18] Technological advances enable it to produce with low emissions (noise, exhaust fumes and other negative emissions) and resource efficiency. It is integrated into local economic cycles and sales markets.[19]

Even the Federal Institute for Research on Building, Urban Affairs and Spatial Development in Germany understands urban production as: A production, or further as companies, that manufacture material goods in the immediate neighbourhood of residential locations.[20]

Various studies, such as the one by Piegeler/Spars 2019,[21] or the Federal institute, have already analysed city-related industries and their potential for an urban production. They specified industry sectors for urban production possibilities, based on existing production sites according to their spatial distance to population density (see figure 1).

Another approach is to create a first typology of the Productive City according to proportional distribution of utilisations. They mention for example light manufacturing industries such as nanotechnology, medical technology and small-scale mechanical engineering, consumer goods and food industries, as well as clothing and furniture manufacturing and breweries. [22]

It also covers information and communication technology, the health and creative industries and forms of urban farming. [23]

In contrast the Productive City as a normative concept, describes the mix of uses between living and working, particularly production, as an overarching concept. Urban Production is linked as a central component to create a mixed-use cityscape. [24]

Industry Sectors for Urban Production

Industry sector	Classification	Example
Agriculture	WZ A	Agriculture and forestry, fisheries
Manufacturing Industry	WZ C	Manufacture of foodstuffs, beverages, tobacco and textiles etc.
Repair of data processing equipment and consumer goods	WZ S95	Repair of telecommunications equipment, consumer goods, furniture and jewellery etc.
Construction Industry	WZ F	Property developer for residential and non-residential buildings, building construction, construction of roads etc.

(translated by Radounikli from source: BBSR 2022)

Figure 1. Industry Sectors for Urban Production

Research question

This research focusses on a very visible and spatial level. The question is: Are production facilities capable to coexist in inner-city structures? By production facilities we mean factories, sites, manufactories, places where material goods are created and produced. More precisely the building envelope required to enable a production process and all the needed programs, as well as the necessary outdoor facilities.

In the context of setting the framework, it is important to specify the investigated industries. The investigation focusses on industrial and serial production processes and not small manufacturers with individual Products. A specific quantity or batch cannot be named yet, to define the production size. This shall be a component to the question's answer.

The instrument presented in this article is a by-product of the overarching doctoral thesis 'The Morphological Typology of the Producing City: by Alexandra Radounikli. [25]

METHODOLOGY

The method of this study provides for the development of an instrument to answer the research question. It is based on three steps, which ultimately aim to provide a systematised assessment of production sites and their urban compatibility, in terms of spatially compatible quality for the location and spatially required quality for production needs. The keywords here are acceptable urban and human scale and added value for all stakeholders. The instrument will be developed in the second step of a total of 3 steps in this research (see figure 2).

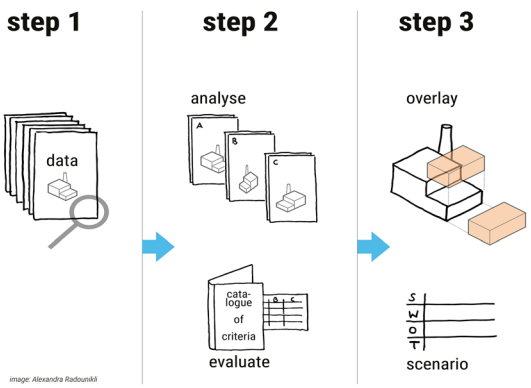

Figure 2. Methodical Steps by Alexandra Radounikli

After an extensive data collection of existing forms of production through desktop research and interviews, a preliminary catalogue of criteria will be developed through the research to enable an initial clustering in parallel. The collected references are industry-related production locations.
In the beginning of the investigation process the parameters of search are kept loosely for an iterative development of criteria.
Current criteria in the process are inner-city location in Germany and further countries and locations with close interlink to the neighbourhood with mixed uses.
The references are also limited. The are based on the urban forms of production analysed by Piegeler/Spars.[26] City-related production forms can be light manufacturing industries such as nanotechnology, medical technology and small-scale mechanical engineering, consumer goods and food industries, as well as clothing and furniture manufacturing and breweries.[27] It also covers information and communication technology, the health and creative industries and forms of urban farming.
In this context of setting the framework, by naming the city-compatible industries it is important to mention the particularly unsuitable industries as well, due to excessive polluting emissions and too large spatial extent. These are especially the heavy industries such as: iron and steel industry, refineries and mining.
To clarify the term “industries”. The research focusses on industrial and serial production processes. No specific quantity or batch can yet be named to define the size of production. These are also being questioned as part of the investigation. Automated and serial production is meant here, and not small manufacturers with individual Products.
To clarify the “stakeholders”. The affected parties are divided in two main groups.
1. “The Production”: All to the Process related participants such as the company, the suppliers, the process itself, everything and everyone who is benefiting from the business directly.
2. “The People”: All Neighbours, employees and participants in direct contact to the Production, who originate from a different user group.
It is possible for an employee to be part of both groups, caused by the interaction between the parties and the focus on the human scale.
Ultimately, in the course of this study, a catalogue is defined with all relevant criteria for the question of urban compatibility in terms of spatial and structural compatibility.

Catalogue of Criteria

The catalogue is structured in three categories, which divide the parameters into morphological, to contextual and procedural aspects.
The structural analysis, called “Body” contains dimensions, volume and shapes. Spatial visible forms of the facilities such as building footprint, concept, heights, roof and façade are meant (see figure 3).
The contextual analysis, called “Context and Embedding” considers all site relating information and the neighbouring conditions and influences such as property conditions of size and form, the accessibility and neighbouring stakeholders, infrastructure and supplies (see figure 4).
The third category is the processual analysis, called “process”, containing all to the workflow related data, which is relevant for spatial demand and emissions such as flow of people and material, logistics, and the product itself in capacity per year and its dimension.
It is to be expected that the third category will bring the widest range of parameters to light, due to the individual production processes and the variety of solutions. Not only the widest range in parameters, but also the highest potential for flexible adjustments regarding innovative technologies, to reduce spatial demand and disturbing emission.

Systems which cause urban “no-goes”, can be detected in this procedure. The biggest challenge of this category will be to recognise and to cluster the pattern.

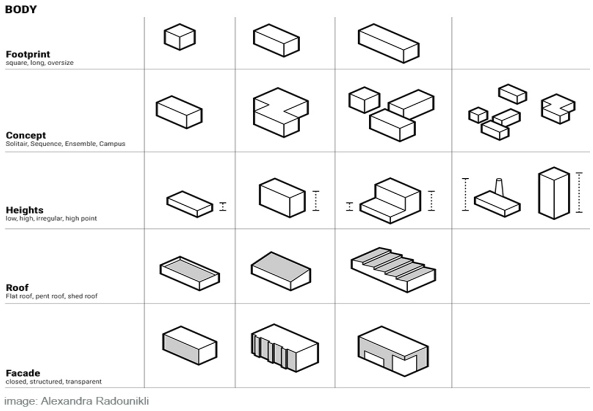

Figure 3. Structural Criteria

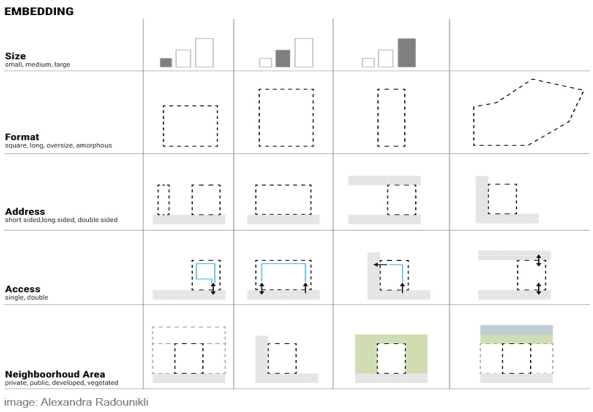

Figure 4. Contextual Criteria

Evaluation System

The catalogue of criteria is followed by the development of an evaluation system. The rating system is investigated by discussions and observation of benefits and disadvantages of these certain situations and parameters. For example, size thresholds of closed facades facing the public space are evaluated. From what length is a monotonous wall considered unattractive? Which roof shape serves cost reduction, optimal lighting and roof utilisation? Are there Trade-offs or is the design absolute? At what frequency and size is a delivery yard unacceptable? Can we control this via production volumes or transport systems? These and other questions form the basis for discussion when creating the evaluation system. Consequently, if the individual criteria are combined with an evaluative indicator that relates to the questions:

- Is it quality for the urban location/the people next to the facility?
- Is it required quality for production process?

By answering those question with yes/no/moderate or irrelevant, it is possible to transfer this rating into a diagrammatic scheme (see figure 5). The Chart shows how a reference is responding to those

two questions. The bigger the scheme the more questions are answered positively, which means we have a high quality for both stakeholders.
The subdivision into the 3 categories also enables a tendency to be read in which area the strength lies. The “Body, Context or Process”.

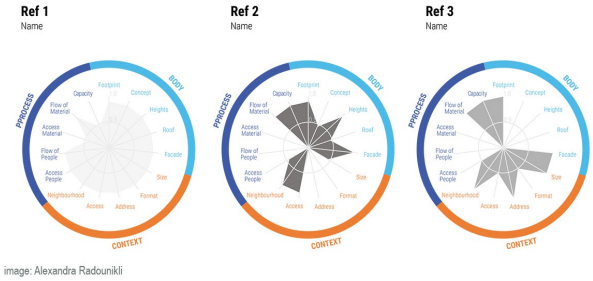

Figure 5. Evaluative Spider Chart of the Criteria

Atlas of Production Facilities

The data and results from steps one and two are to be compiled in a collective work, a so-called ‘Atlas’.
The criteria dealt with are explained, as are the associated indicators (see figure 6). A matrix with all criteria within the three categories (Body, Context and Process) illustrates the system of evaluating indicators. After an explanation of the criteria and the evaluation system, all underlying references and case studies of the data collection are listed as profiles. The profiles include the individual criteria points as well as the evaluation result in the spider chart (see figure 5).
The Method enables a collection of references respectively case studies, an intense analysis and evaluation of existing production facilities and the application of a rating system regarding city compatibility. This data will be summarised in a comprehensive Atlas of production facilities.

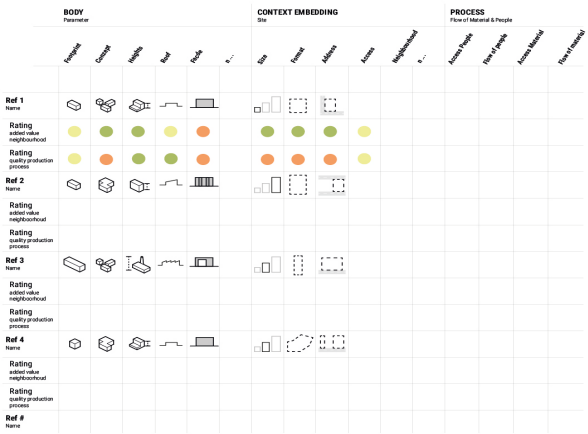

Figure 6. Matrix of Criteria and Evaluative Indicators

CONCLUSION

The Atlas is a by-product of this overarching study, which aims to visualise analysis results and provide an initial spatial assessment for production in terms of urban compatibility. It is a tool that can be used by stakeholders from industry, city government or urban planners to search for new properties or a redevelopment of historical production sides, which aim a mixed-use scape.

The potential results of this investigation are yet to be seen, whether the merging of functions that have been separated for decades will lead to added value in urban life. The social and technical conditions are no longer the same.

The urban processes that were once accelerated by uncontrolled economic growth have shaped the image of countless cities today. The aim of this study is to develop an instrument that can provide further options for future planning developments. An instrument that supports the consideration of all interests of all stakeholders in a mixed-use city scape.

The goal is to create a comprehensive catalogue of urban production forms and their urban conditions that can provide a guideline for the implementation of urban production in existing urban situations.

Because urbanism and production are closely related in our cultural past and could reshape our urban futures.

NOTES

[1] AMPS Summary of Abstract Review Form.
[2] Guido Nischwitz et al.: *Urbane Produktion für eine Produktive Stadt Bremen. Eine Chance für mehr Beschäftigung?* [Urban production for a productive city Bremen – a chance for more employment?] (Bremen: Arbeit und Wirtschaft in Bremen 2021) 11.
[3] Nischwitz, et al*.,* [Urban production for a productive city Bremen – a chance for more employment?], 11.
[4] Nischwitz, et al*.,* [Urban production for a productive city Bremen – a chance for more employment?], 11.
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[8] Jean Haeffs: [New Symbiosis between City and Industries.] (Düsseldorf: VDI Gesellschaft GPL, 2019)
[9] The German Federal Government: German Sustainable Development Strategy 2016
[10] The German Federal Government: The German Federal Building Code, in the version published on 23 September 2004 (BGBl. I p. 2414), last amended by Article 2 of the Act of 30 June 2017 (BGBl. I p. 2193)
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[16] Nischwitz, et al., [Urban production for a productive city Bremen – a chance for more employment?], 9-14.
[17] Martina Brandt, et al.: [Urban Production. An attempt to define the term.] (Gelsenkirchen: Forschung Aktuell, No. 08/2017, Institut Arbeit und Technik (IAT), 2017)
[18] Martina Brandt, et al.: [Urban Production. An attempt to define the term.] (Gelsenkirchen: Forschung Aktuell, No. 08/2017, Institut Arbeit und Technik (IAT), 2017)
[19] Martina Brandt, et al.: [Urban Production. An attempt to define the term.] (Gelsenkirchen: Forschung Aktuell, No. 08/2017, Institut Arbeit und Technik (IAT), 2017)
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ABANDONED MOUNTAIN: A COMPARISON BETWEEN TURKISH AND ITALIAN MARGINALIZED AREAS

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INTRODUCTION

The research aims to uncover the underlying causes of **abandonment and territorial fragilities** in mountain areas of Italy and Turkey. This will help in understanding the similarities and differences between the two regions and contribute to formulating strategies to address these critical issues.
The methodology employed in this study involves a multi-faceted approach to analyze abandonment and territorial fragilities in mountain regions. Initially, a comprehensive literature review is undertaken to examine existing research on the subject, providing a foundational understanding of the issues at hand. This is followed by a comparative analysis, where data and findings from the selected countries, Italy and Turkey, are systematically compared to identify both parallels and contrasts in their respective mountain regions. This is followed by an in-depth analysis of the **Alps in Italy and the Taurus Mountains in Turkey,** to provide insight into the unique challenges and conditions of these regions.

QUESTIONS ABOUT TERRITORIAL FRAGILITY

The term "fragility"[1] has become a prominent concept within the landscape of academic research in the fields of architecture and territorial studies in Italy. In 2012, the Italian government launched a program called the "National Strategy for Inner Areas" (SNAI),[2] aimed at reversing past trends by focusing on territorial development and cohesion. Its goal was to counteract the marginalization of these areas compared to large metropolitan sectors and to combat the demographic decline of the so-called “inner” areas of Italy.
In Italy, the term “inner areas” refers to those territories classified as “fragile,” which are distant from major centers and, consequently, from essential services (e.g., education, healthcare, transportation, etc.). These areas account for 60% of the country's total surface, 52% of municipalities, and 22% of the population. However, these territories have been shaped by centuries-old anthropogenic processes, making them rich in both tangible and intangible cultural heritage, as well as environmental and naturalistic features.
Geographically, these "inner" territories are mountainous or hilly areas where natural or man-made boundaries have historically shaped their development and morphology. In Italy, many of these “inner areas” have experienced, especially since the post-World War II period, a gradual process of marginalization, leading to population decline, and in some cases, the complete abandonment of entire regions. This has resulted in reduced land use, worsening hydrogeological risks, the degradation of cultural and landscape heritage, and increased social costs for the nation as a whole.

The issue of abandonment in marginal, rural, and mountainous inner areas has gained relevance on a global scale. Similar processes are occurring across Europe and the world, though characterized by different local scales and historical-cultural dynamics, but sharing common roots. As Andrés Rodríguez-Pose[3] points out in a global context, neoliberal policies have concentrated investments in cities, considering them as the engines of national economic growth. Meanwhile, inner areas have become increasingly "fragile," leaving to a fate of neglect. At best, they have been targeted by territorial cohesion policies, but this has not halted the process of decline and depopulation.
Within this introductory framework, the focus of this paper is particularly on mountainous territories, which have long been marked by "fragility" not only from a natural perspective but also from social, economic, and institutional standpoints, exacerbating imbalances and undermining subsistence economies while concentrating development in urban centers.

VERTICAL MORPHOLOGY AND CULTURAL LANDSCAPE

Mountains cover 24% of the worldwide land surface and host 12% of the world's population.[4] A further 14% of the global population lives close to mountain areas and are crucial to over fifty percent of civilisation because they supply water, electricity, agricultural and forest products, as well as being centres of biological and cultural diversity, religion, recreation, and tourism.[5]
As Bätzing[6] masterfully explains in his seminal book on alpine territories, which are considered a key element at the heart of Europe, the "man-nature" relationship has profoundly shaped the appearance of mountainous regions. Human actions have molded the alpine landscape, defining its habitability. Centuries of human activity have created a mosaic of small-scale landscape elements. This has given rise to what are known as "cultural landscapes," which serve as a testament to land use shaped by previous generations and today form a living record of both material and immaterial values.

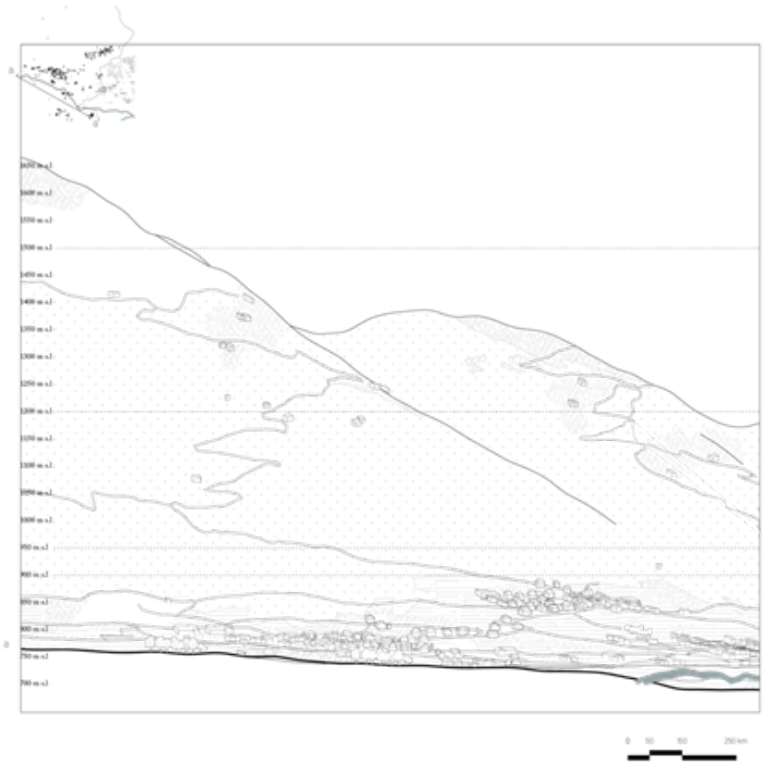

Figure 1. Vertical Morphology section of an Alpine Hamlet in Val di Sole (Trentino-Italy) by Dominika Adrianna Komisarczyk

Taking Alpine region as an example, unlike the historical landscape changes that occurred over long periods and were not so drastic as to erase previous traces, today's transformations are happening at a much faster pace and on a larger scale, to the point where the old landscape is completely disappearing.[7] A historical inventory and classification are essential to ensure that the cultural landscapes shaped by humans in the Alpine Space are not lost, allowing for the understanding and preservation of transition areas and ecological niches, which are critical for biodiversity. Industrial pressure has, in fact, accelerated the processes of abandonment and underutilization of certain areas, while exacerbating the industrial exploitation of specific territories.[8]

Mountains In Italy

Nowadays, the mountainous areas in Italy, defined as "inner areas" of the country, are at the center of a lively public and academic debate[9] that acknowledges their intrinsic values and discusses the necessary transformations of the human-influenced space. In Italy, mountains represent nearly 52% of the 8,101 municipalities,[10] which, in terms of territorial extension, corresponds to 54.3% of the national total. This data highlights the relevance of mountainous areas in national management dynamics, despite the fact that less than 19% of the entire population lives there.

Italy, characterized by two main mountain ranges—**the Alps** to the north, which function as a transboundary chain, and **the Apennines**, which run from north to south—has implemented economic policies in the 20th century that led to the abandonment of many valleys, driven both by internal migration to cities and by emigration abroad[11]. In the highlands, outside of areas associated with major sports tourism,[12] there has never been a true repopulation.

Today, we are witnessing a significant shift in perspective. As Vito Teti[13] noted, the abandonment of Italy's mountainous areas, from the Alps to the Apennines, is often linked to forms of representation and perception, whether external or internal, of these places. Salgaro[14] emphasizes the importance of the a priori negative perception of the morphology and location of mountainous areas, where their verticality ("ruggedness") is seen as a disadvantage. The conception of the mountain as a place of natural poverty, isolation, backwardness, and territorial distress is often the result of a partial and prejudiced view, or it is the consequence of recent phenomena of abandonment, degradation, and decline.[15]

Mountains in Turkey

Turkey's topography is profoundly influenced by its location within the Alpine-Himalayan orogenic belt, which has given rise to an exceptionally rugged and elevated landscape. Approximately 56% of the country's landmass lies above 1000 meters in altitude, with mountainous regions comprising nearly two-thirds of the total land area.[16] A major orogenic belt dominates the Turkish landscape: the Northern Anatolian Mountains. These mountains can be found along the northern part of Anatolia, while the Taurus Mountains can be found on the southern part. In the Aegean region, mountains run perpendicular to the coast, whereas the mountains in the Black Sea and Mediterranean regions run parallel to the coastline, resulting in a significant change in climate and settlement patterns.[17]

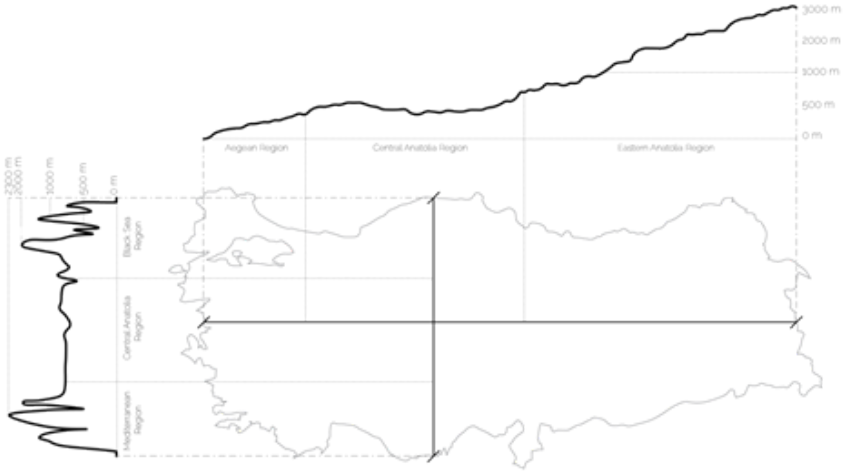

Figure 2. North-South, East-West cross sections of Turkey by the Author

The mountainous regions of Turkey are not merely geographical features but are central to the livelihoods of the rural population residing there. There is a great deal of life support provided by these areas, especially through activities such as cattle breeding and animal husbandry, which can be found frequently in alpine meadows within the Taurus Mountains. The verticality of the landscape has also led to the development of unique architectural forms and settlement typologies, shaped by the need to adapt to steep inclinations, varied microclimates, and the availability of natural resources.
In order to understand the architectural morphology and typology that characterize rural mountain settlements, it is essential to understand the verticality of these mountainous areas and the accompanying socio-economic activities.

TWO-SPEED OF DEVELOPMENT:
Equalities And Similarities In The Two Countries

Abandonment and traces of re-birth in Italy

As we pointed out in Italy, since after the II WW, the mountainous areas have experienced significant depopulation and abandonment. While the Italian population has grown by approximately 12 million people over the past 60 years, mountain regions have lost around 900,000 residents. According to the report, nearly all population growth has been concentrated in the plains (8.8 million new residents) and hilly areas (around 4 million).[18] However, there are two notable exceptions to this trend: Trentino-Alto Adige and Valle d'Aosta - two regions located upper in the north and fully alpine areas, depopulation has not occurred. These two autonomous regions are the only exception and have seen significant population growth over the last 60 years, due to a special political approach and social cohesion.
Nevertheless, today, we are witnessing a significant shift in perspective also in other marginalized Italian regions. As Vito Teti[19] noted, the abandonment of Italy's mountainous areas, from the Alps to the Apennines, is often linked to forms of representation and perception, whether external or internal, of these places. Salgaro[20] emphasizes the importance of the a priori negative perception of the morphology and location of mountainous areas, where their verticality ("ruggedness") is seen as a

disadvantage. The conception of the mountain as a place of natural poverty, isolation, backwardness, and territorial distress is often the result of a partial and prejudiced view, or it is the consequence of recent phenomena of abandonment, degradation, and decline.[21]
Today, there are some trends towards a 'return' to these lands, even if it is to be seen as a minority phenomenon, but one that has grown especially since the Covid-19 period. As Membretti[22] oints out, we can summarise this anthropological trend in categories. The amenity migrants, 'would-be mountaineers', or 'mountaineers by choice' (such as smart workers). At the opposite end of the spectrum are the 'mountaineers by necessity' or 'mountaineers by force': they are the economic and labour migrants, many times immigrants from distant lands.[23] Compared with these are the 'remainders', mountaineers by birth, young people, who seek work and study experiences straddling their place of origin and metropolitan areas.
Yet, all these populations of neo-inhabitants, or remaining inhabitants, seem to favour de facto (and sometimes despite themselves) a multidimensional intensification and complexification of exchanges between city and mountain.

Abandonment reasons in Turkey, uncontrolled sprawl and transformations

The abandonment of Turkey's mountainous regions can be traced through three key historical periods: the 1923 population exchange, the industrialization era of the 1950s, and the tourism boom of the 1980s. The 1923 population exchange between Greece and Turkey led to the forced migration of Greek Orthodox Christians from Turkey and Muslim Turks from Greece,[24] resulting in the abandonment of numerous villages, such as Kayaköy,[25] which was left desolate and later preserved as a historical monument. In the aftermath of this event, significant socio-cultural changes began to take place in Turkey's rural and mountainous areas, which set the stage for further depopulation.
In the 1950s,[26] the onset of industrialization and agricultural modernization initiated a wave of internal migration from rural to urban areas. Due to mechanization, agricultural labor became less necessary, and better educational opportunities in urban centers led to mass migration, further depopulating rural areas.[27] The 1980s saw the rise of a liberal economy that prioritized the service and industrial sectors over agriculture, accelerating rural-to-urban migration.[28] Tourism investments in coastal cities drew even more people away from the mountains, leaving these regions marginalized and neglected. As a result of the political emphasis on urban development and the lack of investment in rural areas, Turkey's mountainous regions continue to face challenges in terms of depopulation and abandonment.
As today, the Republic of Turkey, with a population nearing 85 million, exhibits a significant urban concentration, with approximately 79 million inhabitants residing in cities. This urban dominance leaves only around 6 million individuals, or roughly 7% of the total population, living in rural villages.[29] Upon closer examination of the demographic distribution in these rural areas, it becomes apparent that the number of young people is continuing to decline, intensifying the effects of rural depopulation and demographic aging.[30]
Although Italy and Turkey may appear distinctly different, their mountainous regions share several critical issues. The two countries share a number of common characteristics, including high rates of unemployment, an aging population, and a lack of investment in essential social services, such as healthcare, hospitals, and education. These common challenges highlight the broader issues of marginalization and neglect faced by rural and mountainous communities.
In regards to Turkey's mountainous regions, the political landscape and vision have remained largely unchanged, and the challenges they face have remained of marginal interest. It is well known that for centuries, the Yörük[31] people, a semi-nomadic group that inhabited these regions, practiced a traditional lifestyle of seasonal migration.[32]

Despite this shift, the living conditions in these mountain areas are evolving. Besides the aging population, there is also a pressing need for public services, such as hospitals and schools. These factors have resulted in a dichotomy in the development of these regions. Some former villages have experienced uncontrolled urban sprawl, fueled by investments and the influx of second-home buyers, transforming them into towns that resemble small cities. An example of this transformation is Korkuteli Village[33] in Antalya, which has undergone significant growth due to such dynamics. However, smaller and more inaccessible villages continue to suffer from neglect and abandonment, adding to the challenges the mountainous regions face in terms of demographics and economics. There is a growing disparity in development and investment that points to the need for a more balanced approach to development and investment, in order to prevent the further marginalization of these communities and to ensure sustainable growth that preserves both their cultural heritage and environment.

Although Italy and Turkey may appear distinctly different, their mountainous regions share several critical issues. The two countries share a number of common characteristics, including high rates of unemployment, an aging population, and a lack of investment in essential social services, such as healthcare, hospitals, and education. These common challenges highlight the broader issues of marginalization and neglect faced by rural and mountainous communities.

THE FUTURE: LEARNING FROM SIMILARITIES

Working on regenerating the marginalized areas in Italy as in Turkey we point that human actions must encompass responsibility toward the timing and methods of natural resource reproduction, avoiding individualistic and technocratic approaches with short-term impacts. Instead, ethical actions should be undertaken in line with a traditional and sustainable environmental management system.[34] "The only viable development is sustainable development," where globalization processes are integrated into the Mountains region without turning these into the periphery or resource mines for metropolitan areas.

In this regard, the concept of "transition" for these territories is understood methodologically as an analytical system that yields formal results through deduction. On one hand, this involves developing methodologies for reading historical transitions in a vertical landscape, seen as the outcome of a collective effort where the form is decoded as a series of altitudinal layers. On the other hand, it includes operational tactics for a range of transformative actions, positioning the mountain as a territory for experimentation.

Although Italy has made significant progress in addressing the challenges faced by its mountainous regions since the early 2000s, the perception of these regions has gradually changed. However, despite the progress, still today much work remains to be done to fully revitalize and sustain these challenging regions. As a result of Italy's efforts, it is evident that mountainous areas are becoming increasingly recognized and an effort is being made to address their socio-economic and environmental concerns.

In contrary, Turkey's mountainous regions continue to suffer from neglect. The impacts of social services, economic fluctuations, and other variables have further complicated the situation, but still there remains a striking lack of research, investment and interest in this field.

Today, working in these contexts—once sidelined from policy agendas—means defining and activating regenerative tactics that can systematize transformation projects focused on heritage. In this process, architecture can assume a renewed significance in response to the changing conditions of contemporary times.

Given the similarities between the challenges faced by Italy and Turkey, it is imperative to foster research interest in Turkey by drawing on the Italian experience. Italy's two decades of work provide

valuable insights and a potential model for Turkey to follow. With the assistance of the knowledge and strategies developed in Italy, Turkey could develop sustainable solutions tailored to the unique context of its mountainous regions by leveraging their knowledge and strategies.

NOTES

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FUTURE OF THE CITY CENTRE IN FOUR CONTINENTS: CULTURAL PASTS – URBAN FUTURES – CULTURAL FUTURES

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INTRODUCTION

This paper is derived from a UK Arts and Humanities Research Council project, set in the four cities of Newcastle upon Tyne UK (Europe), Newcastle NSW (Australasia), Pretoria-Tshwane (Africa), and Joao Pessoa Brazil (South America). City centres have developed through a number of eras. Most were predicated on commercial and retail development from the mid-20th Century, but demand for this kind of space is diminishing rapidly, predominantly due to the Fourth Industrial Revolution accelerated by the covid pandemic.[1] These four cities were selected for the study because they are located in four different countries in four different continents. While individual cities cannot represent continents or even countries, they can be indicative of responses from different geographies, governance systems, populations, heritage and cultures.[2] Every city can be characterised by its buildings and spaces, and this investigation focuses on the similarities and differences in these centres. Fortunately, none of them is constrained by a grid and block layout.

The objective of this paper is to investigate the cultural pasts of these four centres through the visual images of their buildings and spaces. This will be followed by analysis of the socio-political structures that are currently generating urban futures. Finally, there will be proposals for how cultural futures might be generated.

CULTURAL PASTS

Newcastle upon Tyne has a clear series of historical layers. Starting with the Romans discovering the first point since their arrival at the coast that they could cross the river, and establishing Pons Aelius, development clustered around the Quayside before moving northwards up to the plateau. Arguably, the most significant built culture took place in the early 19th Century, when a local builder-developer constructed a new town centre on a 13.5 acre field in the middle of the plateau.[3] It enhanced the character of place and hastened its re-designation from a town to a city, and capital of North East England. The developer chose to build the facades in stone, with a classical architectural language adapted to local conditions, designed by architects in the town, and has become known as Tyneside Classical (see Figure 1). The aim was to establish a local grandeur and the principal street has been voted as the best in the country.[4] Part of the scheme was Eldon Square, a peaceful leisure space in the heart of the city, where people living and working in the centre could enjoy the greenery (see Figure 1).

Newcastle NSW is defined by its harbour and entrance to the Hunter River, with Nobbys Head as the physical and symbolic beginning of the city. It is called after Newcastle upon Tyne, mainly because both were coal towns, and they share the names of suburbs. It has a linear centre running along the harbour, comprising five precincts, which have developed from East to West. The most culturally significant is the middle one known as Civic. Nearby is the Cathedral with small, neat houses huddled around it, appearing as the epitome of Lozano's two building traditions (see Figure 1).[5] At its core is Civic Park, bringing greenery and water into the centre (see Figure 1). It is defined by some of the symbols of society, including – the Civic Theatre and 1929 City Hall, with its historic Council Chamber; the Council's Administration Roundhouse, the City Library and Regional Art Gallery; University House, and the Conservatorium.[6] These buildings represent a clear expression of the cultural past brought into present-day life. Unfortunately, the Council moved out to an anonymous commercial building in the West End during 2019, leaving the City Hall as just an events space and the Roundhouse as a five-star hotel. This has had a detrimental effect on Civic and even the name makes less sense.

Figure 1. Newcastle upon Tyne (top) Newcastle NSW (below)

It is not a co-incidence that the visual culture of the city centres in the two developing countries belongs to other societies. The name Pretoria is derived from the Afrikaner folk hero Andries Pretorius. Titles are significant to the psyche of communities and in the 1990s, there was a strong feeling that the name Pretoria was associated with apartheid and racism and should be changed. The name Tshwane, meaning *we are the* same,[7] became a popular choice and reflected the transformation of the country. At the historic core of the city centre is Church Square. Pretorius originally designated it as a marketplace. It is surrounded by significant buildings. The Palace of Justice or Palace of Injustice, as local people would term it, was where Nelson Mandela and his compatriots were tried and imprisoned, and where the Freedom Charter was first written on the cell wall (see Figure 2).[8] Together with Ou Raadsaal (The Old Government Building), it was designed by Dutch architect Sytze Wierda, in the last decade of the 19th Century. The concept of these buildings was supported by President Paul Kruger, whose statue was located in the Square in 1954. Other buildings include – The

Old Capitol Theatre, Tudor Chambers, and the General Post Office. During the 1948-1994 Apartheid period, Africans and Asians were excluded from the City Centre that includes the Square. However, the present National Government feels that it chronicles the country's history.[9] It has become a gathering place for people, and students, office workers, residents and tourists, can be seen taking in the atmosphere (see Figure 2).

Brazil has not had an indigenous architecture for at least 500 years. Since then, it has been the recipient of various styles and imposed developments, mainly from Europe and especially by the Portuguese. In Joao Pessoa, the river provided easy passage for the Portuguese invaders. They established a city centre up the bank on a plateau, which is now known as the Historic Core.[10] Objectively, it appears as a beautiful environment, with squares and streets defined by churches, civic buildings, schools and houses; and all surrounded by lush greenery. The buildings are brightly coloured and well decorated in the Portuguese colonial style (see Figure 2). However, closer inspection reveals that the local government has departed, the schools are disused and deteriorating, and many houses have grills over the doors and windows and stand empty. From the 20th Century, Brazil developed a strong native school of modern architecture.[11] There is a feeling that the affluent favour modernism, regarding historic colonial buildings as out of date, and representing a period of their past that they do not wish to revisit. On the opposite side to the river, the topography runs downhill through the traditional commercial hub, to the Solon De Lucena Lagoon (see Figure 2). The circular lake appears as a distinctive feature on all the historic and contemporary maps of the city, as the symbolic centrepiece of a park that has been a constant attraction for both residents and visitors.[12]

Figure 2. Pretoria-Tshwane (top) Joao Pessoa (below)

URBAN FUTURES

Current transformations will determine urban futures unless there is a change in approach. All four centres are now dominated by the private sector. This presents a number of implications. There will be a lack of construction of cultural buildings and the symbols of society. All the cities seem to be

relying on their existing museums, theatres, concert halls, art galleries, religious places. Local governments in Newcastle NSW and Joao Pessoa have already left their established centres.[13] The new locations are peripheral, less accessible, and not distinctive places where governance can thrive. In Newcastle upon Tyne, reduced funding and resultant loss of council staff, has meant that the authority has retrenched to only part of the Civic Centre. While the main Council building is retained in Pretoria-Tshwane city centre, several departments have moved out to distant locations.
Individual plot development of buildings in space predominates rather than the patterns of coherence through the design of space that is apparent in the cultural pasts (see Figure 3).[14] There are no plans to create new public and green spaces, regardless of literature during the covid period that emphasised its importance to physical and mental health.[15] All the cities are affected by the Fourth Industrial Revolution but the responses are quite uneven as new building continues, despite the trend of reduced demand for retail and commercial properties.

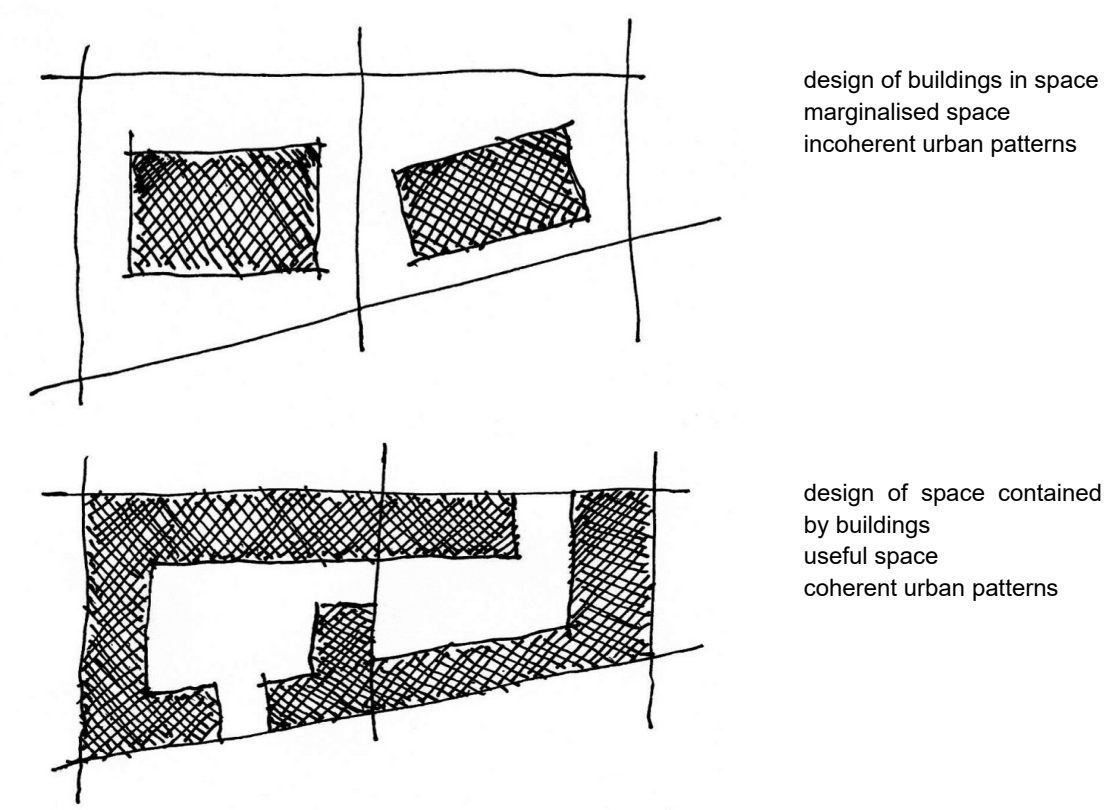

Figure 3. Alternative arrangements for development

In Newcastle upon Tyne, despite the reduced demand for office space, commercial development continues (see Figure 5). This is property market driven, which has little concern about leaving empty buildings in its wake.[16] The promise that new development creates employment has been consistently shown to be at least debatable. All that happens is that new buildings offer better terms, especially in energy consumption. This city is also experiencing a large number of new hotels, due to city breaks becoming a growing trend. The City Council's argument is that external spending power can only benefit the local economy, and therefore should be encouraged as much as possible.[17] Yet, there has not been a proper analysis of how much income remains in the centre. Newcastle NSW is patchy in its urban core. There are significant buildings that are well-used, but equally there are empty and largely poor-quality structures, and areas of unused land. There is a general policy of densification in

Australian city centres, and inexplicably the favoured form is high rise. In the west end of the city centre, height restrictions have been relaxed and the City Council is encouraging proposals for high rise development from private sector developers.[18] Much of the land in all precincts has been owned by the New South Wales State and the City Council. The State is effectively selling its share to private sector developers for the construction of undistinguished commercial buildings. Their occupancy is difficult to assess, but there is a substantial number of existing empty offices (see Figure 4). The City Council's land is being developed slower than it would wish, but the new constructions are mainly high rise housing (see Figure 5). All of these interventions are on the individual plot basis, and none include consideration of external space. In Pretoria-Tshwane, although the local authority is reassuring in its strategies for the city centre, there is little confidence in it as place to invest. The image is of neglected buildings, wastelands and even informal settlements.[19] The new housing is generally in gated communities with only vehicle access and private external space (see Figure 5). All three cities are aiming at using students to enhance human activity in the public realm and rescue struggling city centre economies.[20] Newcastle upon Tyne has already experienced a large number of new student residences. There are concerns about high student populations and their dominance in relation to other social groups. These issues raise important questions about the impact of this transient group on the image and perception of the city centres. The exodus of residents from the Historic Core in Joao Pessoa has led to a kind of new city of towers adjacent to the ocean (see Figure 5). These are individual developments and mainly gated communities.[21] Their basement car parks mean that residents never need to engage with the external environment. There are also upmarket tourist facilities for the seasonal business in domestic holidays, producing overcrowding for certain periods of the year, particularly on the roads.

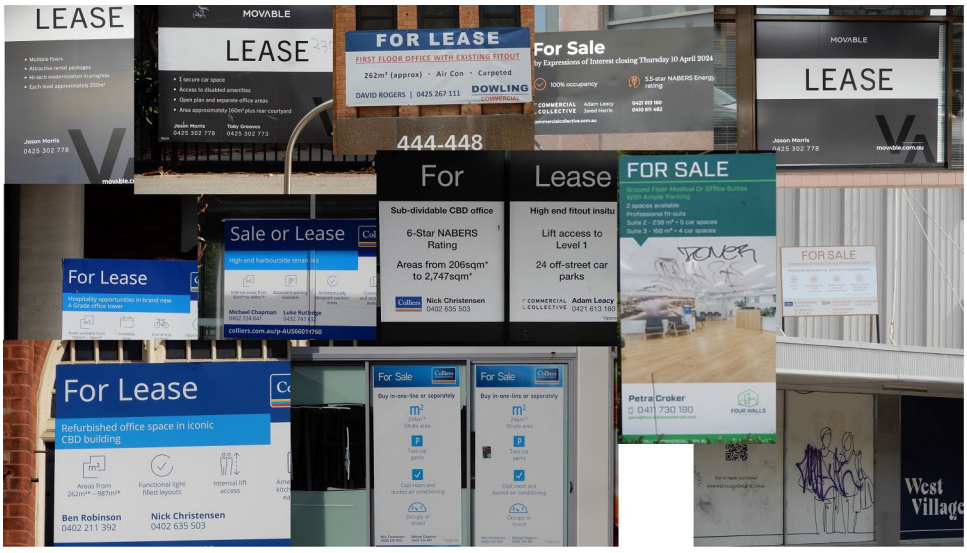

Figure 4. Real Estate Boards, Newcastle NSW City Centre

Figure 5. Newcastle upon Tyne and Newcastle NSW (top)
Pretoria-Tshwane and Joao Pessoa (below)

CULTURAL FUTURES

In September 2019, Newcastle upon Tyne City Council created the role of Director of Place. By spring 2024, it was retitled Director of Investment and Growth, which represents a shift in emphasis.[22] This appears to signal increasing encouragement of private sector development. The concern is that even more public land will be sold to international speculators. It is clear that the community and local businesses need greater involvement with city centre decisions. The Business Improvement District NE1 already offers temporary installations for the benefit of the community. A form of governance needs to be established which is not dominated by the local authority. As well as literature during the covid period asserting that public space is advantageous to people's mental and physical health, these kinds of places have been where the framework of societies were debated and formulated.[23] Thus, they have considerable cultural significance. At a time when land and property is becoming available in the city centre, the creation of communal spaces should be a priority. Although it is too late for Library Square (see Figure 6), there is still potential for other spaces. While the people of Newcastle NSW enjoy the Civic Park, it is the only green space in the city centre, and there is little public space except adjacent to highways. Moreover, new commercial and housing developments tend to fill their plots. Citizen Centric Civic will not happen without programmed events (see Figure 7). The cultural environment would be enhanced by less road space, but more effective public transport will be required. Repurposing buildings, especially those that are part of industrial heritage, would also enrich the cultural environment.[24] There are opportunities to link them together with contemporary architecture (see Figure 7).

Figure 6. Newcastle upon Tyne neglected part of the city centre and proposed Library Square see Figure 5 for what is being constructed at this location as part of Urban Futures

Figure 7. Newcastle NSW Citizen Centric Civic and Industrial Heritage

In Pretoria-Tshwane, the local population is seeking a post-colonial architecture that encourages community. It is set out in a Revitalisation Strategy as part of Vision 2030.[25] Plans include eight new squares and five new gateway parks. The Northern Gateway will announce the entrance to the Government Estate, where historical and proposed buildings can be set within a series of public spaces. The inner city centre will continue to be based around Church Square, with north-south and east-west axes emanating from it. The Revitalisation Strategy identifies the Civic Precinct as the people's place with a design that accommodates a variety of activities during both the day and night time. In addition, Government and Ceremonial Boulevards will create walkways and pedestrian streets, there will be green corridor, and a number of vistas connecting important symbolic buildings and places (see Figure 8). The objective is to celebrate South Africa's heritage, culture and freedom. If achievable, this strategy represents a significant commitment to enhancing the public realm.[26] A first phase, *Operation Reclaim*, which will see the roll-out of more pedestrian spaces, is already underway.[27] There is concern about the informal economy, but markets have always been a tradition in the city. With careful regulation, they could continue to enrich the local culture. Joao Pessoa is experiencing an organic arts-based counterculture, enabled by available space in the Historic Core.[28] There is a cynical perspective that empty space equates to cheap space, and that is why it is being used. However, there is an alternative view that the architectural backdrop is appreciated by these groups, who also find the defined spaces comfortable and useful (see Figure 9). Moreover, young people are gathering in public places and express their own culture (see Figure 9). There seems to be a notion that these people do not have the objection to the colonial buildings and spaces that seemingly is felt by their seniors, and are willing to accept this environment as part of the present-day city. In

addition, in 2017 Joao Pessoa was designated as a UNESCO City of Crafts and Folk Arts, as part of the wider Creative Cities Network, founded in 2004.[29] There is already a research project in progress, involving the Environmental Laboratory of Urban Design and Building at the Federal University of Paraíba, and the Secretariat of Economic Development and Labor at João Pessoa City Council.[30] The objective is to contribute to the enhancement of the João Pessoa Creative District, mainly within the Historic Core. Affluent national tourists at the coast could be introduced to the Creative District through positive promotion. There is a large straight avenue from the coast to the Lagoon with access to the traditional centre. This is an ideal opportunity to construct a tram line between the two locations to allow for easy movement.

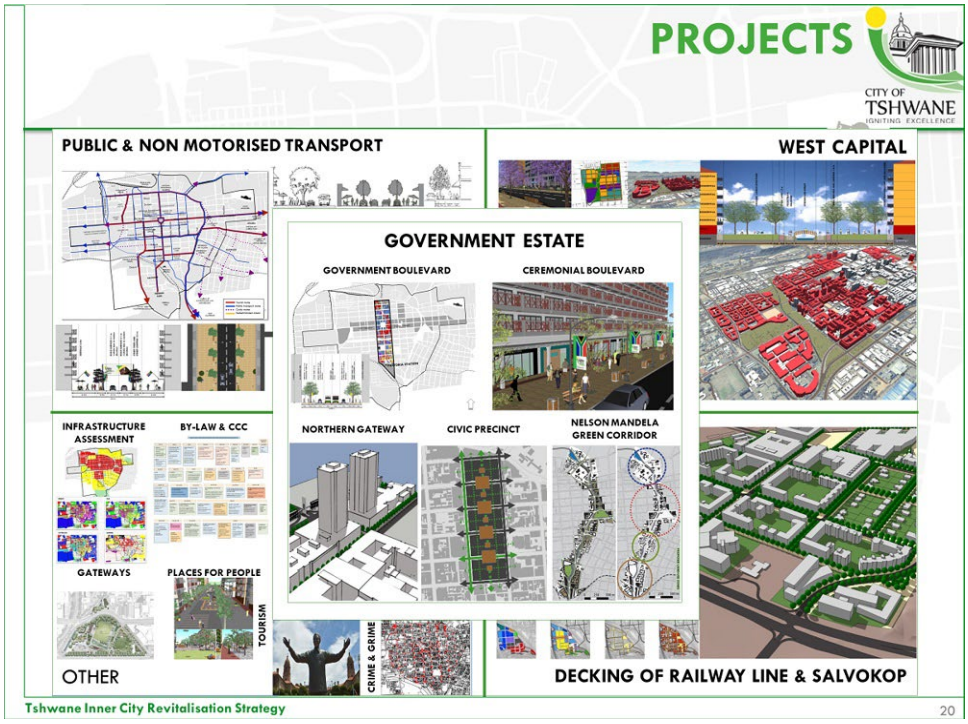

Figure 8. Pretoria-Tshwane Revitalisation Strategy

Figure 9. Joao Pessoa arts-based counterculture and gathering in public places

CONCLUSION

The buildings and spaces of all four cities chronicle their cultural pasts. In Newcastle upon Tyne, there is the clarity of layers from different eras. In Newcastle NSW, the origins of the city in terms of its situation at the mouth of the Hunter River and its linear layout along the harbour, are fundamental

to its structure and cultural past. Although the city centres in the two developing countries represent the cultures of others, nevertheless, they are also part of these countries' history. The second half of the 20th Century and the beginning of the 21st Century have not served urban centres well. Current developments are creating urban futures. They lack distinctiveness of place and are not even on a human scale. Cities need to rediscover expression of culture in buildings and spaces, as a means of re-engaging with their communities. Of the four city centres, only Pretoria-Tshwane has a clear strategy of how this may be done. Unfortunately, there is a lack of confidence in the urban core, which would need to be overturned before progress could be made. In Joao Pessoa, there is a real opportunity in rejuvenating the historical centre, especially if it could be linked with the tourist industry. The two Newcastles present more difficulties, while public land continues to be sold to the private sector. In Newcastle upon Tyne, the business community is interested in public places. If a governance structure involving them and the community could be created, there are available designs by local people that might enhance cultural development. Newcastle NSW needs a complete change in direction to encourage community activity in protected green spaces.

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FIRGROVE FOREVER: SUPPORTING LEGACY NARRATIVES OF A COMMUNITY IN DRAMATIC TRANSITION THROUGH YOUTH PARTICIPATORY ACTION RESEARCH IN DIGITAL ARTS

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INTRODUCTION

Within many thriving metropolises around the world, neighborhoods that live on their fringes often face challenges with the socio-economic imbalances and deeply rooted systemic biases against low income, racialized and immigrant families. Our project looks into the Jane-Finch neighbourhood in the northwest corner of Toronto as an exemplary community that is home to incredibly diverse and creative groups that have often become the focus of nation-wide media attention due to historically negative portrayals around violence, urban decline and social dysfunction. Using emerging digital technologies and virtual platforms in a model of *co-creation* and *co-operation* with Jane-Finch residents, *Firgrove Forever* is a series of virtual presentations housed on web-based servers as a persistent and updatable archive of oral narratives, images, video interviews and immersive soundscapes, ensuring the continuity of community spirit and cultural production especially in rapid developmental, geographical and ecological change. This project is a robust case study into how increasingly democratized digital tools and web-based platforms can be prototypes for future cultural resilience, and the team is currently in the process of broadening its scope to include more neighborhoods of precarious status, and amplify the voices of equity-seeking groups at policy making tables of municipal and provincial governance. While originally motivated to function as a creative outlet for the youth to articulate the way these changes to their geographical and cultural landscapes have exposed a myriad of intersectional issues, the outputs of the project that were co-created with youth now function as the only immersive archives of the buildings and community spaces that do not exist anymore, proving the way such persistent archives will factor strongly in the Youth Participatory Action Research in the near future especially in decision making processes around community legacies and conservation of intergenerational memories and cultural cohesion. The paper will detail this ongoing collaboration including the various collaborative workshops and co-creation activities that have ensued.

GEOCULTURAL BACKDROP

Named after the intersection of Jane Street and Finch Avenue West in northwestern Toronto, Canada, the Jane-Finch community is one of the largest, most diverse neighbourhoods in the city. As noted by community advocate and historian Wanda Macnevin, the neighbourhood was developed as an “instant

city" growing out of farmer's fields in the decade spanning 1961-1971.[1] Much of the growth during this time was facilitated by a government agency that developed low income and public housing on the land around Jane and Finch. The availability of affordable housing attracted tens of thousands of people, composed mostly of a diverse range of new immigrants. However, while the housing was built very rapidly, in the decades that followed, the government failed to provide the social infrastructure needed to sustain the community. Soon, the community lacked the settlement, employment and language services vital to new immigrants; schools became overcrowded, community centres didn't appear for years, and public transportation was never better than sporadic[2]. Furthermore, the shifting demographics of the neighbourhood from one that was dominated by people of a European background to one that was composed of a mosaic of people from Asia, Africa, the Caribbean, and Latin America, resulted in growing racial tensions. As a result of these factors, the neighbourhood became known for its high levels of poverty and prevalence of gangs, drugs and criminal activity.

However, as noted in a community-led report about the Jane-Finch neighbourhood:

"Jane-Finch has more to offer than the negative stereotypes about it presume. In recent years, the community has been characterized by a high level of civic engagement, witnessed by its numerous community organizations, high levels of activism, and arts programs; however, it has also traditionally been propagated as one that has been marked by negative, racialized stereotypes. Issues of poverty and racism are unquestionably a part of everyday life for members of the community. There is a huge capacity for change in the neighbourhood, but there is a shortage of resources to facilitate this change. This is a community where economic opportunities and social services have not developed in pace with need, and the effects have been extremely detrimental for the people who call Jane-Finch home."[3]

Compared to the rest of the Greater Toronto Area, Jane-Finch features a higher rate of immigrants and people new to Canada, a higher rate of youth and children, a higher rate of single parents, a higher rate of low-income families, a higher proportion of rental households, a higher rate of unemployment, a lower percentage of population with university education and a higher percentage of population with less than a high school education. Furthermore, this heavily racialized community - over 70% of its population identify as visible minorities - has the highest density of public housing in Canada. In 2018, Toronto Community Housing (TCHC), the largest public housing provider in Canada, targeted the Firgrove-Grassways community located in the Jane-Finch neighbourhood, for a process called "revitalization".[4] Revitalization is a process where current residents are evicted and relocated, the existing housing infrastructure is demolished, and private developers are brought in to build new mixed-income housing. Revitalization is a fraught process, with some arguing that it allows TCHC to leverage the value of the land to renew and replace ageing housing infrastructure while others oppose it given its intrusive nature.

In addition to the revitalization process currently underway, the larger Jane-Finch neighbourhood is also undergoing rapid change with the construction of a new public transit line across the Finch West corridor. While the new transit line will provide more reliable public transit and cut down travel times, it has also ushered in an increase in property values, rapid development and the early stages of gentrification. Within such dynamic changes, how can institutions and communities band together to support cultural continuity and community persistence?

The Firgrove-Grassways Community

A space within the Jane-Finch (JF) community north of Toronto, the Firgrove-Grassways neighbourhood shares similar challenges as other social housing projects in the vicinity in fighting negative media portrayals that situate them as hubs for crime, drugs and social issues. Affectionately

known as *Connections*, it boasts rich cultural diversity and an unbiased caring spirit. In 2014, it was identified as 1 of 31 Toronto neighborhoods to be designated as a Neighborhood Improvement Area (NIA) and was subject to a "revitalization" process to redevelop aging community housing in the area, resulting in a progressive displacement of residents and dissolution of communities as main residential building in the area were torn down or slated for major renovations.[5] In 2018, a partnership was struck between the community and creative Technologists at the neighboring York University led by Professor Joel Ong from the Department of Computational Arts and Director of Sensorium: Centre for Digital Art and Technology[6] with the focus on empowering the youth of this community with critical and technical skills as well as cutting edge media production technology to allow them to record, express, archive and disseminate the stories of this vibrant community as it presently exists.

The York team began discussions with one of the central figures and stewards for the community, Ms Lorraine Anderson, director of the Firgrove Learning and Innovation Community Centre (FLICC). Affectionately referred to as the "Rec," FLICC is one of many sites in Jane-Finch that take on the challenges associated with a disproportionately high number of families with children under 16, including many single parent families. Since 2008, FLICC has offered free after-school and summer programming for youth and young adults. It is also the site of community activity, hosting sewing circles, computer literacy classes, virtual learning, job programs and food banks and is a vital community hub for social connection and mentorship.[7] The multi-year collaboration with FLICC (2017-23) has resulted in a wide range of projects in digital literacy, creative coding, and other forms of support such as grant writing and youth mentorship. Initially proposed as a program to bring creative coding to the youth in the community, this work grew into a series of more diverse content creation workshops based on the interests of the youth, including workshops and guided mentorship opportunities in 360° photography, digital audio recording, avatar building and virtual world construction, prioritizing the creative spirit of the community members and augmenting their creative strengths as a form of empowerment in an increasingly alienating digital world. In our early workshops, participants catalogued areas of interest and captured memories of spaces of value in the neighbourhood, catalyzed by the rapid changes in the neighbourhood and we archived together rich media content that described places of value to the participants. Homes, places for sporting events, stairwells, gardens and roofs of the community housing buildings that were slated for demolition in revitalization plans were discussed, mourned, committed to memory and hung on walls and public spaces around the neighbourhood.

In February 2020, at the height of the Pandemic's first wave, a disastrous fire broke out unexpectedly, destroyed the Rec, taking with it more than a decade of of memories and removing a vital space for the youth during a time of intense lockdown, confining them to their houses and personal spaces amidst rising cases of domestic violence and a systemic imbalance in vaccine delivery and social distancing options.[8] After the fire, we realized that the digital archives of our workshops were some of the only remaining media recordings of the community produced by residents, and in the milestone homecoming events (where displaced residents were invited back to share in a meal together and rekindle community spirits), we learnt that these immersive environments were reminders of the spaces that used to exist, even insofar as they would trigger rich sensory memories and togetherness. In light of these events, the immersive potential of virtual archives gained a poignancy, as they could now permanently archive some of the last memories so valued by community residents.

THE FIRGROVE MIXED MEDIA ORAL NARRATIVE PROJECT

Despite the socioeconomic challenges and tumultuous history, the Connections community is home to an outsized proportion of artists and community leaders. Their work represents the diverse and vibrant energy of a community that is resilient to massive change. With this in mind, the York team now led

by Ong and David Han, an award winning technologist, XR artist and community activator,[9] decided to make the creation of an immersive virtual environment the central focus of this project and to use it as a platform to amplify the stories and memories of the neighbourhood. Entitled "Firgrove Immersive Media Oral Narratives Project", this virtual environment would consist of 'bubbles' of 360° panoramic photographs and audio interviews conducted with residents in the summer of 2022 positioned around a virtual recreation of the Firgrove neighbourhood in Mozilla Hubs, a web-based platform that allowed users to create immersive virtual environments that can be accessed through a web browser. As a web-based, immersive environment, this project could be accessed by anyone with an internet connection and provided them the ability to invite multiple users simultaneously to explore the project and connect telematically in the virtual platform. Crucially, the project was also available on mobile devices, not requiring exclusively the use of HMD (head-mounted displays) so the safety concerns of contagious contact during the Pandemic were much reduced.

Developed by Han, the environment itself was a virtual re-creation of the Firgrove neighbourhood as it existed in 2019. It was created using a photogrammetry workflow featuring Google Earth[10] images of the neighbourhood taken prior to the demolition of the buildings. Spherical bubbles are positioned around the virtual space for visitors to 'walk' into and experience a panoramic image taken by community youth with cameras provided during workshops. Sound recordings of the spaces via ambisonic devices provide a fully immersive audio environment for these spheres and capture the ambient acoustics of stairwells, carparks, lift landings, community spaces like playgrounds, basketball courts and swimming pools. As such, this project existed as a sort of memorial to the community and a living archive that could be potentially be updated with community created content. Documentations of the immersive, 3D environment are now stored on Youtube.[11]

#FirgroveForever

In Spring 2023, the team had the opportunity to launch a community exhibition at the Gales Gallery at York University on occasion of Congress 2023, a major academic conference for the Social Sciences and Humanities Council that was attended by thousands of delegates and community partners[12]. Within the theme of "Reckonings and Reimagining", the conference was a moment for institutions of higher learning to being the work of "imagining and enacting the terms under which we might create a radically different world committing to knowing and caring for each other across our differences (and) re-imagine a new set of social relationships grounded in decoloniality, anti-racism, justice and preservation of the earth".[13] The exhibition sought to build on the collaborative relationships we had with FLICC and support crucial and timely reimagining of the future together as the neighbourhood was undergoing such dramatic transitions. The hastag #FirgroveForever was initatied by youth at FLICC after the fire to connect and provide a supportive network on social media.

The exhibition was one in a series of homecoming events for displaced residents to revisit friends and uncover artefacts and memories from the old community together. The physical installation featured items collected from residents and salvaged items from buildings that had been demolished, including road signs, sewing machines and posters. It also featured new works created by community youth in a series of STEM-based workshops led by workshop facilitators Liz Tsui and Jacob Turola where groups of kids aged 6-15 created light boxes modelled after Yayoi Kusama's "Infinity Rooms" – rooms that were lined with mirrors creatively positioned to stretch reflections into a infinte regression. These homemade boxes, about the size of a foot each, represented a portal within which each participant could stretch their imagination and hope for the new neighbourhood into the future. We also installed the Connections mural,[14] a mural commemorating the lives of several youth in the community that was previously installed on the side of FLICC. In an unintentional but natural way, the gallery thus became a space for both community and institutional partners to congregate,

celebrate, share, reminisce and even mourn; as well as for municipal leaders, who were invited to the exhibition, to reckon with the ongoing systemic imbalances in funding, social services, education, housing and career opportunities that had given rise to the issues of gun violence in the community.

Firgrove Reimagined

As part of the "Firgrove Forever" exhibition, Ong and Han assembled a working group comprised of 8 community artists and leaders. They collaborated with each member to design and create a virtual room in Mozilla Hubs each based on their creative inclinations and inspirations. These virtual rooms hosted a wide range of media, from video footage, photography, 3D modelling and motion capture. The collection of these rooms was entitled "Firgrove Reimagined," as a way to reinvigorate the discourses around the Revitalization project in the Jane-Finch neighbourhood. Each artist was asked to reimagine themselves, or their work within new spaces and how that might look. Hosted in Mozilla Hubs, it was accessible through visitors mobile devices, but at the exhibition venue, was additionally presented through a VR headset mounted at the gallery. Documentations of the immersive, 3D environment are now stored on Youtube.[15]

Designed again by Han, this project similarly utilized a geographical digital twin of the neighbourhood as the earlier, but this time, instead of a portrayal of a previously existing geography, "Firgrove Reimagined had a landing page that placed the visitor in an abstracted version of the major intersection of Jane-Finch (Jane Street and Finch Avenue West). This particular intersection had, for the past 5 years, been marked by the ongoing construction of a new light-rapid transit line, and so, as the viewer explored the virtual version of this intersection, they would encounter construction barriers and road signs, some positioned to allow the viewer to ascend or descend to upper or lower levels within the space. Throughout the space are doorways that lead to the individual rooms that were developed in collaboration with various community artists and leaders. We provide a short description of each of the rooms here:

1. 'Home' by community activator and photographer Stephanie Lucas is a virtual gallery of images of the areas around Firgrove, done as an homage to the spaces and architectures of the Grassways, including 17 Cane Grassways, a block in the Connections neighbourhood where many artists used to live.

2. Nathan Baya, a home-grown artist, songwriter, performer and performance coach, designed a room to reflect the various creative outputs of his work. A tireless advocate of the youth in Jane-Finch, Nathan's room displayed rich media elements of Jane Street Speaks,[16] an open mic platform for Black youth to showcase local artists who didn't have accessible or affordable venue spaces. It also hosted a virtual stage from which future live performances can be streamed, and telematic audiences invited to experience this together.

3. Christine Le, Vietnamese-Canadian host and community leader's room features the launch of the Jane Finch Eats project. Beginning in the iconic food court of Yorkgate mall, the team filmed a mini-documentary with Christine as host visiting local hotspots, tasting the food and speaking to the owners about their journeys, food and thoughts about the changes in the neighbourhood.

4. Tiffany Ford, Executive Director for PEACH youth centre[17] in Jane-Finch. Her room begins in the stairwell of 5 Needle Firway, an iconic building in the Firgrove neighbourhood where she grew up. Each of the rooms on the 5 floors provides a glimpse into her career and the ways she has fought to support and change the perceptions of this neighbourhood as entrepreneur and former politician.

5. Octavia Riley, artist and community activator's virtual space embodies the timeless archetype of the hero with a thousand faces. Beginning in a virtual re-creation of her childhood home her room serves as a potent vessel, amplifying the voices and aspirations of the community.

6. Teryl Knox, community animator's room was designed like a giant warehouse turned gallery space. On the main floor large pieces of buildings lay on a floorplan created from Toronto Community Housing revitalization plans for the Firgrove neighbourhood. These objects were scaled models of buildings that are color-coded to size and type, and visitors were invited to picked up and placed anywhere they pleased. They could then go up to a catwalk and take a picture and leave it in the room, allowing all to be part of the reimagining process and to value each and every creative input.
7. The final room was created in collaboration with spoken word poet, Venesha Cardwell. This room is a reimagining of her piece, "The Projects", a poem that she composed about the struggles of living and growing up in Jane-Finch. The team made use of motion capture technology to create a digital twin of Cardwell performing the piece in the room.

Further Considerations and Conclusion

Within the context of the overarching goal of archiving, documenting, and paying homage to the creativity of this community, the various facets of the project have aimed to provide an open, accessible, participatory, and fun environment that could be shared with other community members, policymakers, urban developers, and others around the world. Crucially at the time of writing, post-pandemic literacies in virtual connectivity have provided a boost to diasporic communities across the world who have historically faced challenges in cultural continuity. Within Jane-Finch, as we have documented, such affordances are not a given - digital tools like computers and tablets are in short supply. Our project had to find ways to equip the communities first and foremost with tools through grant funding, and a technology upcycling program at the university's Makerspace, and other non-profit groups diverting unused resources to groups in need. Our model of community engagement also required an assiduous cultivation of relationship and trust within groups of precarious status such as refugees, persons of color, youth and the elderly. Such work happened through collaborations with non-profit organizations and individuals who functioned as the gate-keepers to these groups – most importantly as a form of accountability for our team to ensure that our activities were not ethically challenging.
For us it is this aspect of relationship building that underlying any of the activities we do, and any of the technologies we use - in the way that institutions may support and sustain this support for communities in need. As academics in institutional roles, what are conversations that need to be in place to continue support (both financial and social) for our partners that may not align with institutional modes of evaluation, attribution or accreditation of research and research-creation methodologies? This is an open question, or more importantly a commitment to addressing this question - how might we as researchers, engineers, artists and academics locate these gaps in support structures (whether financial or not) and disrupt the power imbalances that our institutions have over communities of precarious status? How can creative practices such as these de-centre institutional knowledge and produce care?

NOTES

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THE MOTOR CITY'S URBAN HERITAGE: A BRIDGE TO DETROIT'S URBAN FUTURE

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INTRODUCTION

Detroit has undergone various transformations over the last century. Known as the city of Henry Ford and the assembly line, and referred to as the Motor City, Detroit served as the global hub for automobile manufacturing. The city also invested deeply in an urban form and infrastructure made possible by the private vehicle: low-density urban neighborhoods surrounded by suburban sprawl connected to a historic core by an extensive network of urban highways that disrupted the pre-automobile city. At its height, the auto industry supported a working class enjoying middle-class wages, making this form of city functional while the economic engine thrived.

However, industrial decline and civil unrest dramatically reset the image of this city, which eventually became synonymous with urban dysfunction, crisis, crime, and cultural upheaval. In a remarkable backtracking, Detroit evolved into a hybrid condition between urban and rural, marked by a staggering loss of population and building fabric. As Detroit emerges from this nadir, this course of events provokes fresh thinking about cities in the 21st century, especially American cities. The far-reaching and detrimental planning decisions of the mid-20th century that centered on the infrastructure for the private automobile, are now giving way to decisions focused on urban forms that recognize the shortcomings of an auto-centric city. This paper explores how Detroit's crisis can now lead to a cutting-edge urban transformation that builds on its heritage, serving as a potential model for other post-industrial American cities.

THEMATIC FRAMEWORK

The relationship between heritage and urban revitalization is a growing focus of study worldwide. Organizations such as the UN,[1] UNESCO,[2] and ICOMOS[3] assert that heritage plays a crucial role in fostering local development and livability of a city.[4] In this regard, Waterton believes that linking "heritage as a solution for overcoming economic depression and community fragmentation with areas suffering the effects of deindustrialization" is strongly present in post-industrial regions of the world.[5] Researching deindustrialized places requires understanding heritage and its importance for integrating heritage management and urban development.[6] In one sentence, "When properly managed, heritage can enhance the livability of surrounding areas and sustain productivity in a changing global environment."[7] Therefore, heritage has become an essential aspect of urban planning, requiring governments to develop well-defined strategies and efficient approaches for urban rehabilitation to optimize its potential consumption.

Berger and Wicke highlight that the studies of industrialized cities and their industrial heritage, influenced by neoliberal policies in North America, reveal significant cultural and geographical changes. However, the cultural and identity-based transformation witnessed in cities like Detroit is still not fully understood. They identify the uneven nature of industrialization and deindustrialization, observable in both booming and declining industrial regions. While industrialization is still incomplete in developing regions such as Abadan, Iran, many areas in highly industrialized nations like the United States have experienced significant decline.[8]

Many scholars believe that the presence of people in urban spaces is a symbol of a "successful city" that hides urban issues and helps in imagining a brighter future. Lynch argues in "Good City Form" that places with identity strengthen a sense of place.[9] This sense of place is closely tied to the human presence in urban spaces, marking the importance of a balanced relationship between people and their places. Indeed, it is due to the fact that a place has a unique identity that a person makes a deep connection to it, which, in turn, motivates the individual to visit and return to the place over and over again, thereby contributing to the vitality of the place. Therefore, preserving urban vitality depends on preserving places with distinctive attributes. In this context, cultural preservation, with an emphasis on heritage, stands as a crucial element in defining the identity of a place. Consequently, one way to rehabilitate and recover the deindustrialized places, where workers' communities created specific culture and identity,[10] is to examine them through a heritage perspective.

In this essay to study Detroit as a deindustrialized city, we rely on scholars like Doucet and Smit, who outline three approaches in response to cities under shrinking pressure: growth-oriented policies, smart shrinkage, and no action.[11] Shrinkage is typically viewed as a transient phenomenon and is thus taboo for politicians, leading them to do nothing in declining urban areas.[12] The most widely used policy remedies are those focused on growth.[13] Inspired by the growth narrative[14] and the transition from urban managerialism to urban entrepreneurship,[15] local governments aim to promote private investments to generate new demand for housing, jobs, and capital. Regeneration plans often involve property-based, site-specific methods,[16] and they take the form of sports arenas, flagship ventures, and inner-city neighborhood revitalizations. Improving the local quality of life is the main goal of these strategies to draw in and keep investors as well as wealthy, middle-class households.[17] From the other perspective, many scholars believe that successful cities in 21st century are those that effectively define themselves as tourist destinations.[18]

A VISION FOR BOLD URBAN FORM

Detroit's urban formation reflects a bold vision rooted in the emerging culture of early 19th-century American industrial cities. The bold vision for the unique 1807 plan by Augustus B. Woodward's, inspired by Washington DC, generates a rich and dynamic system of boulevards, streets, alleys, and open spaces, emphasizing public infrastructure and aesthetics. At major intersections, nodal points are skillfully resolved to define key public open spaces with strong visual connectivity. The plan also designated open space at the heart of each section or precinct of the plan, in the center of the neighborhood, providing for public infrastructure that supported the community.[19]

As Detroit became the home of the automobile industry in the early 20th century, private vehicle usage increased, initiating a new wave of urban transformation. The adoption of rapid transit and streetcars facilitated sprawling expansion into untapped rural areas. This allowed residents to move and live further, enabling a widespread urban structure that gradually decreased reliance on public transit, fueling the rapid proliferation of low-density residential communities. This novel manifestation of urban mass transportation changed the design into a more subdued, less centralized urban form. Over the subsequent decades, new highways have been built, redefining Detroit once again, but this time in

a destructive way. New highways led to neighborhood segregation, the division of the city, and ultimately, disinvestment and sprawl.

INDUSTRIALIZATION AND DEINDUSTRIALIZATION

By the 1950s, Detroit had become the city of highways, making a network of roads a huge part of the whole city. The thriving auto industry caused the population boom to 1.8 million, a sixfold increase since 1900. The post-war economic upturn and growth in the auto industry drove the prosperity in the 1940s and 1950s, which as a result, Detroit's working class caught the middle-class lifestyle across racial lines marked by homeownership, cars, appliances, and vacations. The cityscape transformed into the new downtown structures, along with sprawling, low-density neighborhoods.

The late 1960s saw Detroit's industrial begin to falter. It experienced the white flight to the suburbs, resulting in a declining population and diversity, ultimately becoming a black majority city with a significant loss of tax revenue to support the remaining city residents. In 1969, job cuts in the car industry were becoming a phenomenon, which was further exacerbated by the 1970s oil crisis, which in turn destroyed the city's economy. As a result, Detroit's population declined by 40% from 1950 to 1990.

At the beginning of the 21st century, Detroit underwent a slow urban deformation; in a couple of areas, the in-between state between the urban and rural has occurred. Massive population loss rendered public services inefficient and unsustainable, placing Detroit on the brink of collapse. Parts of the city that were once fully developed were left with only a few houses, leading to not only urban dysfunction but also disintegrated urban form. Moreover, the focus on suburban growth and the loss of centripetal force on the city's core created a diffuse urban form, fragmented by highways. This spatial and social fragmentation intensified the issues of poverty, crime, and disinvestment that plagued and continue to plague Detroit as it struggles to rebuild and recover. Remnants of Detroit's industrial past, abandoned factories, and empty streets serve as surreal reminders of the city's challenges. During this period, urban planning and development policies often were unsuccessful in considering the realities of a shrinking city.

Now, with Detroit showing signs of revival—a slight population uptick and improving property values—the question of how to manage its urban reformation is crucial. Should the city attempt to recreate its past, or is there an opportunity to learn from the problems of low-density, auto-centric sprawl and build a new future for Detroit? How will these decisions impact Detroit's sustainability and resilience? What's the role of the heritage and identity of Detroit recognized as the motor city in these decisions?

CASE STUDIES IN URBAN REVITALIZATION

In recent years, Detroit has renewed its emphasis on urban revitalization through efforts to expand tourism. For instance, the acceptance of large-scale gambling has led to the growth of several new casinos, which were intended to boost the local economy and urban vitality by drawing tourists to the city. While Detroit needs to focus on repopulating its neighborhoods and creating vibrant spaces to attract and retain residents, these developments even have caused social challenges and more disruption to the city's urban form.

By growing the studies on the role of heritage in the livability of a place, Detroit decided to leverage its rich cultural heritage and industrial identity to achieve its goal of becoming a "world-class city". This approach centers on integrating heritage into urban planning and development strategies. This strategy will seek to establish a paradigm of sustainable and socially inclusive urban resilience. Projects such as Michigan Central Station redevelopment, Campus Martius rehabilitation, and the restoration of the Detroit Riverfront are emblematic of this strategy, focusing on the rehabilitation of

historic structures, the enrichment of public spaces, and community engagement along with economic development, each with distinct approaches to heritage.

Public space in focus: Campus Martius

The revitalization and repurposing of Campus Martius in Detroit's historic downtown core is a prominent example of change and investment in public space based on heritage. As a historically and strategically public space, Campus Martius has drawn the attention of planners and designers, becoming a hub of innovation and urban revitalization. This convergence of interest reflects the collaborative spirit and forward-thinking vision essential for Detroit's transformation and rebirth. [20]

With its location at the "Point of Origin," where Detroit's coordinating street grid starts, the Campus Martius has developed into the center of downtown by providing a vibrant area for people to meet and gather informally and regularly host festivals and other events. The park's diverse plan, offering a plethora of activities in the summer and winter has helped revitalize downtown by drawing people and energy. By adding infill to buildings inside and surrounding the park, Campus Martius has also promoted private investment.

Campus Martius's most significant characteristic is that it encourages the coexistence and integration of different cultures. Multiculturalism strengthens social cohesion among in the community and improves the standard of living by bringing livability to the area. These are vital steps for a city like Detroit in the Rust Belt, struggling to overcome its industrial past and embrace a brighter future.

Michigan Central: a vision for the future

The Michigan Central project by Ford Motor Company integrates state-of-the-art technology with heritage preservation, emphasizing Detroit's commitment to sustainable urban development. This project is a significant constituent of Detroit's efforts to create a resilient and sustainable future through the adaptive reuse of its heritage. Mixing historic preservation with modern functionality, the project showcases a forward-thinking approach to urban development that places Detroit as a leader in sustainable urban regeneration. The transition is driven by the increasingly strong awareness of the city's distinctive industrial heritage and its potential as a place for progressive urban development.

The Michigan Central project further prioritizes connectivity; an upgrade in the mobility of public transit, pedestrian paths, and bike lanes will decrease car reliance. At the same time, it uses the inspiration of historic streetcars to introduce new modes of mobility. It envisions office spaces, retail outlets, restaurants, residential areas, and public spaces in mixed-use developments that would create a more vibrant environment. Furthermore, it emphasizes green construction techniques in updating the structure with LEED certification through energy-efficient equipment[21] and design areas that further creative and collaborative work settings along with community engagement, which remains a priority in this project to support the local businesses with a way of developing a sustainable and inclusive growth model.

URBAN FARMING AND GREEN INFRASTRUCTURE

The current transformation of empty lots into urban farms and nurseries points to a powerful opportunity that could build upon Detroit's 1807 open-space concept. This approach could weave a robust green and blue infrastructure into compact urban neighborhoods. While partially outlined in the Detroit Future City plan, this concept could be further developed as a central strategy, evoking inspiration from the 1807 plan as a powerful element of the city's urban design heritage.

TOWARDS A POST-NEOLIBERAL CITY

Far from being unique, Detroit is perceived not as an anomaly but rather as emblematic of disjointed neoliberal urbanism. In this context, a convergence of residents who own or access businesses, enterprises, institutions, and social and financial capital collectively contributes to the emergence of functional and thriving urban areas. This occurs against a backdrop of increasing poverty, despair, and neglect in terms of political, civic, and institutional domains. Detroit is transitioning into a representation of the fragmented, divisive, and independent urban development that characterizes the twenty-first century. To avoid this fate, Detroit can resist neoliberalism as the central approach to development and instead focus on a diversified, connected, sustainable, and resilient urban form that nurtures a local economy, but how can Detroit achieve this?

Detroit serves as a compelling case study for creating a more vibrant and resilient urban environment through the respect, promotion, and investment in cultural heritage. Embracing its rich industrial and cultural heritage positions Detroit to be the role model for sustainable and resilient urban development in the future. The revival of Campus Martius is the key to reviving historical urban spaces in the formation of Detroit's image, identity, and future aspirations. The Michigan Central Station redevelopment plan is another particularly positive initiative. Strengthening its economy through support for small businesses and local enterprises, as well as providing job opportunities and focusing on green spaces and environmental sustainability, would likely result in both the quality of life of the locals and the attraction of the new investment. This approach, as opposed to neoliberalism, requires the active local community involvement in the process of planning and development. These projects are an exemplification of the power of heritage to create lively and functional spaces that, through strengthening the partnerships between the community and the business sector, result in economic growth and vitality of the area. Moreover, by creatively combining rural and urban aspects, Detroit is attempting to move beyond car-centric models.

Preserving the cultural and industrial heritage is not limited to maintaining the physical structures; this involves a commitment to safeguarding the memory, culture, and identity that distinguish a place. In Detroit, efforts to conserve heritage emerge by rehabilitating and repurposing historical buildings, establishing industrial museums and cultural districts, and encouraging public displays of art and cultural events. These undertakings serve to perpetuate the city's past and provide opportunities for residents to engage with their heritage. Emphasizing the industrial identity, Detroit contributes to a sense of belonging to a place among residents and the strengthening of social cohesion, which reinforces the community bonds and bolsters resilience in the face of transformation.[22] Through these projects and projects like this, Detroit has the opportunity to rebuild itself as a model for post-neoliberal urban development.

CONCLUSION

A series of research studies have illuminated the interwoven historical and economic background that has shaped Detroit’s landscape. Comprehensive guidance for Detroit as a post-neoliberal city involves the presentation of novel mobility solutions and the creation of interconnected transportation infrastructures that could provoke urban ecosystems. The analysis of the history of sustainable urban planning, along with the application of new strategies based on this knowledge, will allow Detroit to raise the bar for urban sustainability and vitality-the area will serve as a prime example of how the heritage can influence a sustainable[23] and resilient urban future.

The approach also preserves the city's unique identity, which is rooted in its industrial past and is a valuable source of wisdom for other cities struggling with similar problems within urban regeneration and sustainable development. Detroit's journey from industrialization and deindustrialization to urban rehabilitation could be an inspiring model for other cities facing similar challenges.

Despite the progress in recent years, Detroit still faces significant obstacles on its path. Systemic racism, disinvestment, and unequal access to opportunities and resources have complicated the city's recovery. Economic inequality, affordable housing, and social justice remain important issues in urban sustainable development. Drawing on its urban and cultural heritage, Detroit has the potential to make an entirely new iteration of the American city.

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NOTES

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[19] Two remarkable public parks are developed by a landowner to the west of the Woodward fragment. Crawford and Elton Parks are two neighborhood-scale spaces of unique definition in the history of American urban planning, with stepping lots that set up an oval-like space. The perimeter wood houses, most likely with gracious porches, vary in configuration and position on their lots, defining the edges of the parks with elegant complexity. These innovative urban spaces carry forward an interest in both neighborhood social/civic infrastructure and geometric playfulness as a place-making strategy. Despite the initial power of the plan, Detroit's actual urban growth was driven by self-interest and land speculation, abandoning the Woodward plan. It resulted in a fragmented gridiron pattern typical of Midwestern cities. Diagonal avenues extended beyond the fragment, but the systematic neighborhood integration envisioned in the original plan was not pursued.
[20] The Campus Martius has the potential to serve as a place where the entire populace of Detroit can engage in documenting their individual recollections of that particular place, regardless of whether they are positive or negative in nature.
[21] The Michigan Central Train Station, an iconic symbol of Detroit's grandeur and demise, is undergoing a significant revival, spearheaded by Ford Motor Company in collaboration with numerous partners. Through drawing in companies, innovators, and scholars, the initiative hopes to establish a vibrant ecosystem that propels economic expansion and technological breakthroughs. The emphasis on mobility solutions places Detroit at the forefront of upcoming transportation advancements while also reflecting the city's historical significance as a hub of the automobile industry.

[22] Repurposing historic sites for modern uses is a key strategy for integrating heritage into contemporary urban development. Projects like the Michigan Central Station and Campus Martius demonstrate how historic buildings can be adapted to meet current needs while preserving their historical significance. These adaptive reuse projects create dynamic and functional spaces that support economic activity, cultural expression, and community engagement.

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DESERT ECOLOGIES: RECENT ARCHITECTURE IN THE UNITED ARAB EMIRATES

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INTRODUCTION

How should we build in the desert today, during an era of climate crisis and with the challenges posed by a post-carbon future? A new generation of architectural works in the United Arab Emirates engages with the natural dynamics and cultural richness of desert life with novel spatial ideas melded to energy mediation and adaptation. We pay particular attention to the construction methods and techniques in recent projects by three international firms working in the region. The Dar al Mafaeda School and a family compound by RCR Arquitectes take cues from age-old ways of building, where dwelling in the desert relied on indigenous passive control systems that evolved with the resources at hand. State-of-the-art technologies and the principles of the circular economy guide a new aesthetic of energy design in Zaha Hadid Architects' Bee'ah Group Headquarters, where form serves as an interface between human activity and the environment. Ecological tourism of desert archaeology, geology, flora, and fauna takes center stage in two publicly commissioned environmental interpretive centers, the Buhais Geological Park and Khor Kalba Turtle and Wildlife Sanctuary by Hopkins Architects. These projects take inspiration from the sinuous formation of dunes and desert geology to construct buildings and landscapes as unified wholes. Responsive to the complex differentiated environment, the architects offer a departure from the predominance of globalized building forms unrelated to local climate patterns and traditions that have long been associated with the region's construction boom.[1] At a moment of resurgent interest in desert ecologies, the poetics of placemaking and the material choices in these works, reinforce regional identity.

In recent years, many architects and scholars have recognized that desert regions worldwide, covering one-third of the earth's surface, are not inhospitable, empty spaces but sites of complex ecologies and ways of life. They constitute fragile places subject to human impact.[2] In the UAE, the variety of desert landscapes includes barren plains, sand sheets, dunes, *sabkhas* or salt plains, and *burqas* and *mesas* or rock outcropping, that have long been home to the once nomadic Bedouin herders, whose name derives from *badawi* or desert dwellers. The desert is not uninhabited but abundant in native creatures and vegetation that have evolved for water conservation. Plant life effectively absorbs, stores, and manages this vital life source. In such a harsh landscape, where temperatures can reach over 46 degrees Celsius, works of architecture must address acclimatization processes in terms of thermal and solar matter.

The school and houses by RCR, the office complex by ZHA, and the environmental centers by Hopkins Architects are projects at different scales and with very different programs that take a

biomimetic approach. Their inspiration comes from the dynamic forms of wavelike dunes, clusters of marine fossils, and crystal formations known as the rose of the desert. Biomimetic design mimics not just the forms and structure of nature but also processes and systems. Adaptation is key. Each firm of architects has created an expressive language to build a new aesthetic of energy design, with forms enmeshed in the landscape that evoke patrimonial architecture and natural forces. With great sensitivity to desert ecologies, the architects' approach placemaking and materiality in the drylands by taking cues from traditional knowledge of passive environmental control but also from the landscape, leading to sustainability through adaptation.

Figure 1a. Alwah house & Kama house. RCR Arquitects. Dubai, United Arab Emirates. Residential. 2020

Figure 1b. Beeah Headquarters. Zaha Hadid. Sharjah, United Arab Emirates. Office Building. 2022

Figure 1c. Buhais Geological Park. Hopkins Architects. Sharjah, United Arab Emirates. Exhibition Center. 2020

Figure 1d. Khor Kalba Turtle and Wildlife Sanctuary. Hopkins Architects. Sharjah, United Arab Emirates. Exhibition Center. 2021

TRADITION AND PASSIVE DESIGN IN THE WORK OF RCR

The work of the Spanish architecture firm, RCR in the UAE has evolved since their first project, the Muraba condominium, was built in Dubai in 2017. That same year, they were awarded the prestigious Pritzker Prize of Architecture for their early body of work, composed of structures profoundly rooted in the volcanic landscape and forests of their rural hometown, Olot, in Spain's northeastern region of Catalonia. The paradoxical question was: what would they do when confronted with global commissions in patrimonial landscapes far from home? How would they change their design approach? Although the condominiums take cues from the unique light of the waterfront in a restrained and abstract way, this was a commercial project, and the construction method was not tied to local traditions. By immersing themselves in Arabic cultural forms, a second project, the Dar al Mafaeda School, marked a shift in their design process and material choices. For the primary and

secondary school campus at Dubai's frontier with Sharjah, RCR experimented with a honeycomb pattern for the overall site planning. Their design for the educational colony, an oasis, offered a contemporary understanding of traditional Islamic geometries and regional building practices. The relation between interior and exterior spaces, vital to the project, was achieved through a series of passive climatic elements and devices. The architects created landscaped courtyards to mediate the heat where light is filtered through window screens. Large parasols with intertwined structures of metal tubes and textiles create a dense mesh shading the collective outdoor areas. These climate control mechanisms evoke native vernacular construction techniques in modern materials. They hark back to when roofs in the region were constructed with palm tree trunks and fronds or when wooden lattices sheltered windows and textiles covered narrow urban alleyways, known as *sikka*, to modulate sunlight and refresh the air.

Courtyards and screening systems define two houses for the school's client in the same fast-growing, private residential development as the educational complex. On two irregularly shaped parcels of land, set across a small access roadway, the architects have created a multi-generational family compound shielded by walls at the edge of each site. The Kama House, the larger of the two dwellings, serves the client, his children, and his parents. The Alwah House is for his brother's family. The designs offer shared collective spaces and private ones, following the tradition of extended nuclear families living in close proximity. Each house is distributed into ceremonial areas for entertaining and more intimate areas. The Kama and Alwah dwellings are iterations of the same structural system sculpted to the landscape in the form of dunes and desert roses. They depart from the monumental Corten steel geometric forms of rural houses in Spain that RCR built at the onset of their career. Composed of exposed, prefabricated steel parabolic arches, infilled with concrete panels supporting the insulation, waterproofing, and aluminum roofing, the houses in Dubai bring to mind the work of the late 19th century Catalan master Antoni Gaudi, specifically the rooftop of the Casa Mila in Barcelona, with its parabolic arches of varying heights. Gaudi followed biomimetic design principles and structural forms and stated that there are no straight lines in nature.

The dwellings are inspired by desert geologies and ways of life, including dunes, crystals, and nomadic structures.[3] They evoke the forms of Berber tents or *haimas* and the mobile structures of the Bedouin known as *bayt al shar*. Traditionally woven of water-resistant goat or camel hides, the design of these "houses of hair" considered passive ventilation. Hot air under the animal fiber enclosures was drawn out through a vent hole, creating a cooling breeze. The metallic structures by RCR recall tent guy line systems used to stretch fabric in tension.

The two houses share similarities in the construction system but present differences in layout. The more significant in scale, the Kama House, is formed of five dune-like volumes that accommodate three generations. The Alwah House, although smaller, is also composed of five volumes that clearly distinguish between the social and intimate zones of the house, which are connected through the service spaces, including areas for cooking and parking. In both houses, visitors are accommodated by dedicated ceremonial entrances. The layouts bring to mind the customary division of nomadic tents with textile panels to create areas for the kitchen, the family, and the gathering of men, where guests were offered hospitality.

The geometry of the Alwah House is inspired by the desert rose, crystal clusters of gypsum or baryte encrusted with sand grains that arise from the evaporation of concentrated water. Window openings in the house hug the ground to offer views into the courtyard with its reflecting pools. The height of the parabolic arches varies. The floor height has been raised to accommodate technical installations and built-in seating. In the Kama House, the metallic structure marks out the form of a dune and acts as an essential shading device, a tent protecting the interior. Inside, volumes of curved concrete carve out spaces with circulation spaces flowing between them. The sand of the desert functions itself as a

material system that factors in time. Airborne grains of sand will complete the passive control system as they come to rest on mesh screening at the building exterior. Just as in the school project, RCR addresses the problem of designing in a scorching climate by drawing on vernacular traditions. Passive design features reduce the heat's impact by modulating the building with courtyards and screening.

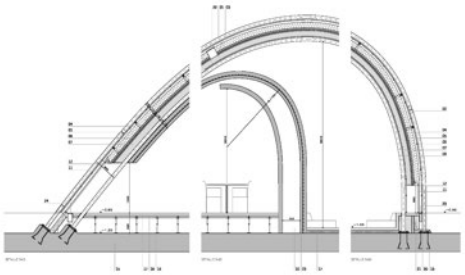

Figure 2a & 2b. Alwah house & Kama house. RCR Arquitects. Dubai, United Arab Emirates. Residential. 2020

STATE-OF-THE-ART TECHNOLOGIES IN THE WORK OF ZAHA HADID

Zaha Hadid Architects not only shape their project with passive environmental ideals but also with state-of-the-art advanced systems that adapt to the desert's shifting climatic patterns. The building acts as a medium for moderating thermal change. With the Bee'ah Group headquarters in the Sharjah desert, ZHA has created a project that engages with the complexity of the territory's ecology at the highest cultural and technological level. The adaptive complex is one of the last projects designed by the Pritzker Prize laureate of 2004, British-Iraqi architect Zaha Hadid, before her untimely death in 2016. The competition-winning design, awarded in 2013, was completed by her office and inaugurated in 2022. The scope, scale, and ambitions of the project are far greater than RCR's housing project and represent the complex integration of the activities and aspirations of the client. The shape and the skin of the building are a manifesto.

The Bee'ah Group, founded as a private and public initiative in 2007, is the region's first integrated environmental service company. The company is dedicated to ecological sustainability, which includes waste management, recycling, clean energy, environmental consulting, education, and mobility under the two-fold banner of sustainability and digitalization. The headquarters had to represent and embody the values of this initiative and accommodate a growing number of employees, with expansions of the company into Egypt and Saudi Arabia. With its commitment to green building, an ultra-low carbon footprint, net-zero energy consumption, and artificial intelligence, the headquarters serves as a learning resource and an object lesson for the company in its endeavors.[4]

The 90,000 m2 site is adjacent to the company's waste management and recycling center, which is essential to the material choices and energy production of the 7000 m2 building. Like RCR's work in the region, the project exhibits passive environmental design features. The metaphorical dunes have been built into the site and are oriented for maximum effect in response to local climatic conditions. Composed of two curving intersecting volumes housing the public programs- the lobby, auditorium, education center, and gallery- and the offices for management and staff, an elongated outdoor courtyard between the two volumes captures the breezes. Sculpted into the desert, the building's low curving forms are set close to the ground, offering views with minimal glazing. The thermal mass, critical to solar absorption and dissipation in the desert, is clad in glass-reinforced concrete panels that deflect the sun's rays.

The project forms part of the company's commitment to the circular economy. It was designed to minimize energy and potable water consumption while extending the life cycle of materials that generally end up as landfill waste. Built with 90% locally sourced and recycled materials from their industrial plant, natural materials have been used, whenever possible, for their thermal value. A field of photovoltaic panels at the site's edge captures solar energy that is stored in Tesla batteries. The project not only relies on renewable energy. Artificial intelligence mediates the building's adaptation for internal thermal comfort. Grey water for irrigating native plants in the landscaped areas comes from the building's wastewater treatment system. Reflecting pools that follow the curving geometries have a cooling effect while melding the interior and exterior design.

The complex parametric geometry, an enormous three-dimensional jigsaw puzzle, presented a challenge to the engineers of Buro Happold, who were charged with realizing the curving and dynamic structure. Initially, the dune forms were to be built with in situ concrete shells. Instead of using a material of extraction and extreme processing, the dunes were ultimately built of complex long-span parallel structural steel ribs. Prefabricated off-site, the elements were easily transported and assembled by non-specialized workers and equipment. The challenging geometry was carried out cost-effectively with minimal on-site materials, which benefited the construction schedule.[5]

The exception to this system is the 15-meter-high bioclimatic concrete dome of the entry that adapts to local weather patterns, providing natural ventilation and passive daylight. During the mild seasons, the dome and its façade are operable, allowing air circulation. When mechanically conditioned for extremes of heat, the recovery system fills the building with fresh air. The heat from the chillers, which would usually be expelled into the atmosphere, is harvested to create hot water. The optimized environmental performance allows for a 30% reduction in energy consumption, leading to the building's LEED Platinum and BREEAM Outstanding qualifications. Novel parametric forms envisioned through computational design are present here, not for their own sake, but melded with material reuse and performativity to expand the concept of architectural innovation.[6]

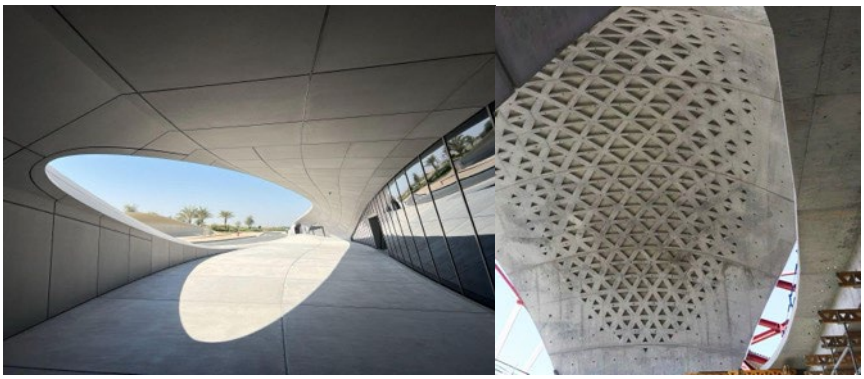

Figure 3a & 3b. Beeah Headquarters. Zaha Hadid. Sharjah, United Arab Emirates. Office Building. 2022.

TREADING LIGHTLY ON THE SAND IN THE WORKS OF HOPKINS ARCHITECTS

If ZHA's building is sculpted into the desert, the Buhais Geological Park and the Khor Kalba Turtle and Wildlife Sanctuary (2019) by Hopkins Architects rest lightly upon the land. In these projects, the ecologies of the desert take center stage. Commissioned in 2019 by the Environment and Protected Areas Authority in Sharjah, the civic projects celebrate eco-tourism to build awareness of the natural and cultural richness of the area. Conceptually, iterations of the same prefabricated system, the projects rest on in situ foundation disks set on the surface of the desert to avoid disruptions to the

fragile sites that excavations might have caused. The buildings mimic the forms of marine fossils but are also suggestive of lunar landing space station capsules.

Located in what was once a prehistoric seabed in Sharjah's interior, the geological park marks out trails with concrete parasols that lead to the Jebel Buhais Mountains, a range of rock outcroppings that feature culturally significant archaeological remains: ancient tombs from the Stone Age, Bronze Age, Iron Age, and Hellenistic Era.[7] The interpretative center educates visitors about deep earth structures, plate tectonics, geomorphology, and sedimentation. Composed of a cluster of five interconnected circular concrete pods of different sizes, the center was inspired by the exoskeleton of nearby sea urchin fossils dating back 65–million years. The pods house interactive exhibitions, an immersive theatre, a café, and visitor facilities. A sixth independent pod contains services. Constructed off site, the pod system creates a superstructure of layers: reinforced concrete ribs, concrete shells, and steel cladding that meld with the colors of the terrain.[8]

In the Kalba Mangrove, the last remaining forest of its kind, on the UAE's eastern coast at the Indian Ocean, the wildlife sanctuary is set among mud flats and estuaries inhabited by turtles, crabs, gazelles, and Arabian Collard Kingfishers. Intended to create engagement with conservation and scientific research, the architects created seven pods that make references to their project at Buhais. Special attention was given to the thermal mass of the building. The tent-like structures are composed of reinforced concrete ribs with an outer layer of scalloped precast circular forms with steel ribbing. Glazing and oculi provide views and light and protect the structures from the harsh sun. The pods offer an itinerary that celebrates biodiversity, including exhibitions, panoramic views, a café, and classrooms to educate the visitor about the rehabilitation of turtles and the care of endangered birds in a unique set of cubic volumes that contain a veterinary facility.[9]

Figure 4a & 4b. Buhais Geological Park. Hopkins Architects. Sharjah, United Arab Emirates. Exhibition Center. 2020.

Figure 5a & 5b. Khor Kalba Turtle and Wildlife Sanctuary. Hopkins Architects. Sharjah, United Arab Emirates. Exhibition Center. 2021

CONCLUSION

The projects by RCR, ZHA, and Hopkins Architects in UAE capture imaginaries of the territory by mimicking the forms of desert geologies. Using age-old knowledge in the form of passive typologies and features, RCR has created the intimacy of dwelling through the reinterpretation of dunes, nomadic tents, and crystals, where passive systems create modern spatial sophistication. Hadid's Bee'ah headquarters integrates the company's expertise in material recycling, local sourcing, and net zero energy consumption values with renewable energy production and by using adaptive intelligent systems for interior comfort. Hopkins Architects perch their projects, that mimic marine fossils, lightly on the barren land, offering views of ancient tombs and rock outcroppings and an itinerary among mangrove forests with diverse wildlife.

These projects go against how things have been done in the UAE during the last 30 years when attention-grabbing architecture was built with little consideration for heritage and natural context.[10] The projects point to a new direction for regional design, one that respects the complex ecologies of the desert. The expressive tectonic languages suggest an aesthetic of energy design where form aligns with the regional climate and engages the local. The building envelopes act as mediators of solar radiation. Sunscreens, light sieves, skylights, oculi, ventilated double skins, and shade covers, are used to fragment light intensity. Sensitive to manifestations of the environment, the architects have enmeshed architectural space and landscape with thermal and solar interaction to reimagine buildings for an era of ecological challenges.

Figure 6a. Alwah house & Kama house. RCR Arquitects. Dubai, United Arab Emirates. Residential. 2020.

Figure 6b. Beeah Headquarters. Zaha Hadid. Sharjah, United Arab Emirates. Office Building. 2022.

Figure 6c. Buhais Geological Park. Hopkins Architects. Sharjah, United Arab Emirates. Exhibition Center. 2020.

Figure 6d. Khor Kalba Turtle and Wildlife Sanctuary. Hopkins Architects. Sharjah, United Arab Emirates. Exhibition Center. 2021.

NOTES

[1] A number of architects and scholars have addressed the significance of the rapid urbanization of the region, where many contemporary projects did not take into account the region's cultural ideals and building traditions. See: Amale Andraos. "The Arab City," Places Journal (2016). Accessed August 10, 2024. https://doi.org/10.22269/160531 and George Katodrytis and Kevin Mitchell, eds. *UAE and the Gulf: Architecture and Urbanism Now.* (London: Academy Press, 2015).

[2] An example of the current interest in deserts and architecture can be found in the Journal of Architectural Education, JAE 77:2 Fall 2023 edited by Ersela Kripa, Francesco Marullo and Stephen Mueller. Here, architects and scholars from around the world, explore the desert environment in its geopolitical, infrastructural, and aesthetic dimensions.

[3] Our understanding of these projects comes from ongoing discussions with the architects of RCR and from interviews with members of the execution and construction team.

[4] "What we do," BEEAH Group, accessed June 1, 2024. https://www.beeahgroup.com/services.

[5] "Beeah Headquarters," Burohappold, accessed June 1, 2024. https://www.burohappold.com/projects/beeah-headquarters/

[6] For the architects' description of the project see: "BEEAH Headquarters," Zaha Hadid Architects, accessed June 1, 2024. https://www.zaha-hadid.com/architecture/beeah-headquarters-sharjah-uae.

[7] For an excellent overview of the desert and coastal environments in the United Arab Emirates see: John A. Burt, ed., A Natural History of the Emirates (Cham, Switzerland: Springer, 2024). https://link.springer.com/content/pdf/10.1007/978-3-031-37397-8.pdf

[8] "Buhais Geology Park Interpretive Centre," Hopkins Architects, accessed June 1, 2024. https://www.hopkins.co.uk/projects/civic-and-culture/buhais-geology-park-interpretive-centre.

[9] "Khor Kalba Turtle and Wildlife Sanctuary," Hopkins Architects, accessed June 1, 2024. https://www.hopkins.co.uk/projects/civic-and-culture/khor-kalba-turtle-and-wildlife-sanctuary.

[10] Current architectural developments in Sharjah distinguish themselves from the strictly commercial buildings in neighboring Dubai. See: Sultan Soud Al Qassemi and Todd Reisz, eds. *Building Sharjah* (Basel: Birkhäuser, 2021).

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PROJECTING HYBRID SECTORS: CHANDIGARH

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INTRODUCTION

The line from imperialism and conflict, modernity, to post-colonial uneven geography defines many global cities. The addition of the concept-object city to this line reveals fissures in culture and development that hinder the future city and depend on separate new urbanisms. In Chandigarh, two important but seldom documented Sectors 22 and 17, now frozen components of a modernist oeurve, are more flexible and have potential to contribute to the growth of the city. The concept city, a representation of the ideal and inflexible by design, creates conditions for, and depends on, large scale uneven urban development challenging the plan's legitimacy. Rigidity of heritage, resisting flexibility of hybrid use and incremental growth, is misplaced here where questions of originality, authorship, and culture define the city that isn't new or radical.

Masked by innovative housing types, Drew and Fry designed a 1947 English Town Plan for Sector 22 as the first built experiment. Corbusier's major contribution of road networks exacerbates outdated concepts of transportation. Today the same road networks create a highly congested city throughout the plan despite significantly lower density than other major urban Indian centers. The green belts of each sector, however, support pedestrian and cycle pathways, encouraged as part of Chandigarh Smart City. In Sector 17, a repetitive module bay defines the pedestrian commercial and civic zone and should support a flexible urban environment. However, single use commercial space, hidden behind surface parking, separates commerce from the working city. The complex origins of the city and rarely discussed sectors, rapid urbanization of the periphery, and corresponding disuse of the center, challenge and give future possibilities within the plan for an open city.

The Orientalists

The empty plain is the opportunity for the absolute new, large-scale modernist project in Chandigarh. Long standing concepts and reading of culture, however, predate the city and give a context for preconceptions in the void. Kipling reinforces the servant and bureaucrat mental construct in colonial India when he writes "Mule, horse, elephant, or bullock, he obeys his driver, and the driver his sergeant, and the sergeant his lieutenant, and the lieutenant his captain, and the captain his major, and the major his colonel, and the colonel his brigadier commanding three regiments, and the brigadier his general, who obeys the Viceroy, who is the servant of the Empress."[1] The codified colonial structure lingers in postcolonial India[2] and is a part of the making of Chandigarh, particularly in light of the city as a symbol of a radical, new modern space.

Violence of the partition creates the physical and conceptual conditions for emptiness of the site and newness required for a large project, but the bureaucratic state continues in the creation of the new

state. Indian administrators make crucial decisions for the future capital with the banality of simple choices and little research.[3] However, Chandigarh, although a state capital for the newly created Punjab, represents for Nehru the national promise of an independent, modern India after colonization. "Let this be a new town, symbolic of freedom of India unfettered by the traditions of the past….. an expressions of the nation's faith in the future." [4]

The overall plan from Corbusier bears similarities to Lutyens's New Delhi after modification of the Meyer plan. The length of every sector matches the length of the monumental axis in New Delhi, the Rajpath, between the Secretariat and India Gate.[5] This singular act, assigning a monumental dimension to each sector, creates vast spaces between neighborhoods today, separated by inaccessible high volume road networks. The series of roadways, designed for a 1950s concept of modernization, in this context without existing urban network, dominates and determines the city form. On the one hand the network celebrates the car as the future modern transport for India. The road's separation from localized community creates difficulty in moving between sectors. Furthermore, Corbusier's documented preconception of the local pedestrian pushes the individual into the center of each sector. The masterplan illustrates loose green bands running the length of the city and through each sector, seemingly to highlight the pedestrian, noble savage. However, in order to cross between sectors, one must walk across several lanes of traffic, curbs, parking lots, and in some cases a fence. The road, and not the pedestrian, is highlighted as a symbol of modernization, as an object, separate from the connectivity of the individual sectors. What should be the physical and social components of the future Smart City- pedestrian networks, walkability, are compromised by the implementation and growth of twentieth century transportation concepts.

Formal tricks in the design of the city show more influence in the recently completed New Delhi plan by Lutyens, created as the imperial capital, now defunct. The phenomenal separation of the building from ground, heightening the monumental experience of the Viceroy's Residence from the Rajpath, is abstracted by Le Corbusier in the capitol complex and serves to separate the complex from the city itself. Unbuilt, the governor's palace mirrors the location and monumentality of Delhi's Viceroy Residence, resembling a capitol building. Nehru rejected the symbolic importance of the governor in the new Indian democracy and so the palace is never realized. Adjacent to the complex is Sukhna Lake, which mimics the shape, scale, and relative location to the city in Delhi. These elements demonstrate a concern for the form of the city which are difficult to absorb in the contemporary city, creating conditions for informal growth and capital flow away from the city.

Orientalism figures strongly in the genesis of Chandigarh despite its design as a symbol of the new independent nation. Le Corbusier's judgement of the Indian falls neatly into both Nehru's post colonial perception of the noble savage fighting oppression, searching for modernity, and Edward Said's concept of ultimate unoriginality within an orientalist construct.

There is nothing especially controversial or reprehensible about such domestications of the exotic; they take place between all cultures, certainly, and between all men, My point, however, is to emphasize the truth that the Orientalist, as much as anyone in the European West who thought about or experienced the Orient, performed this kind of mental operation, But what is more important still is the limited vocabulary and imagery that impose themselves as a consequence.[6]

There are specific spatial consequences of Le Corbusier's orientalist position that make further generational development of the city difficult, generating the need for larger new urban and capital developments that challenge the space of the original city. Road and green networks are separated objects in the city. From the Edict of Chandigarh:

The roads of the city are classified into seven categories known as systems of 7 Vs as below:
V-1 Fast roads connecting Chandigarh to other towns.
V-2 Arterial roads.

V-3 Fast vehicular sector dividing roads.
V-4 Meandering shopping streets.
V-5 Sector circulation roads.
V-6 Access roads to houses.
V-7 Foot paths and cycle tracks.
Buses will only ply on V-1, V-2, V-3 and V-4 roads. A wall shall seal the V-3 roads from the sector. [7]

The seven separate road types, featured prominently in the Edict of Chandigarh as a symbol of modernity, have little distinction in practical use today or when completed. Each road type is designed for a specific type and speed of mechanized transport. With the exception of interior roads, the V1-V3 operate as a single gridded network with no distinction. In the 1970s, this plan did not accommodate the bike or pedestrian, relegated to the single green path in the middle of each sector, separated by 800 meters. Today the V's carry the same type of consistent and heavy traffic, an issue for future masterplans and mobility studies.[8] The pedestrian network is separate from the road network as designed and today. Connections between each sector by car, bike, or foot is difficult, creating haphazard crossings and heavy V1-3 traffic with minimal connectivity into individual living space, a consequence of modernist road planning and the English Town Plan.

Administrators for the new Punjab state set in place urban and social networks for the modern city. In the void of the new and under Nehru's proclamation of the future city unbound by history, planners adopt the garden city and specifically the English Town Plan of 1947.[9] Individual sectors of the city bear significant resemblance to individual blocks and road networks of the earliest town plans outside London. Examples Stevenage and Harlow both show major roads, smaller interior block roads with little connections, and an interconnected green path linking business, education, and residential space. These cities then and are designed for very low densities. Adopted formally in Chandigarh, the designed low density creates pressure for much more urban space outside the plan, now in progress.

In a strange twist, Chandigarh may have influenced later English Town Plans. The city closely resembles the last and largest of the English Town Plans. The overall form, scale of each block and road type, the single commercial sector and linking green network of Milton Keynes mirrors the scale and scope of Chandigarh– as illustrated in Figure 1.

Figure 1. Chandigarh, Milton Keynes Plans.

Koolhaas notes on the futility of plan or no-plan, visible in the area, when he writes "The stronger identity, the more it imprisons, the more it resists expansion, interpretation, renewal, contradiction. The generic city presents the final death of planning. Why? Not because it is unplanned ... [but because] planning makes no difference whatsoever."[10] The dynamic plays out in Chandigarh, in the reverse imperialism of the latest English Town Plan, and in the space outside Chandigarh.

New Chandigarh

Today Chandigarh is still the shared capital for Punjab and Haryana, but is a separate administrative state from both. Two planned cities adjacent to the original Chandigarh plan grow as gateways to the individual states. Mohali, now SS Nagar, to the south in Punjab, and Panchkula to the east in Haryana form the Tri-City with Chandigarh. Informal growth outside the Tri-City area is equal in area to the established urban centers and still does not account for another city in process, New Chandigarh, designed by AECOM.[11] New Chandigarh, city of finance and real estate, outside Chandigarh, Mohali and Panchkula, the planned cities, and adjacent territorial informal growth combine to illustrate a complex conurbation in flux. The new planned city places banking as the head of the city, town center at the edge, and living space is simply divided plots of agriculture between two separate ends– as illustrated in Figure 2.

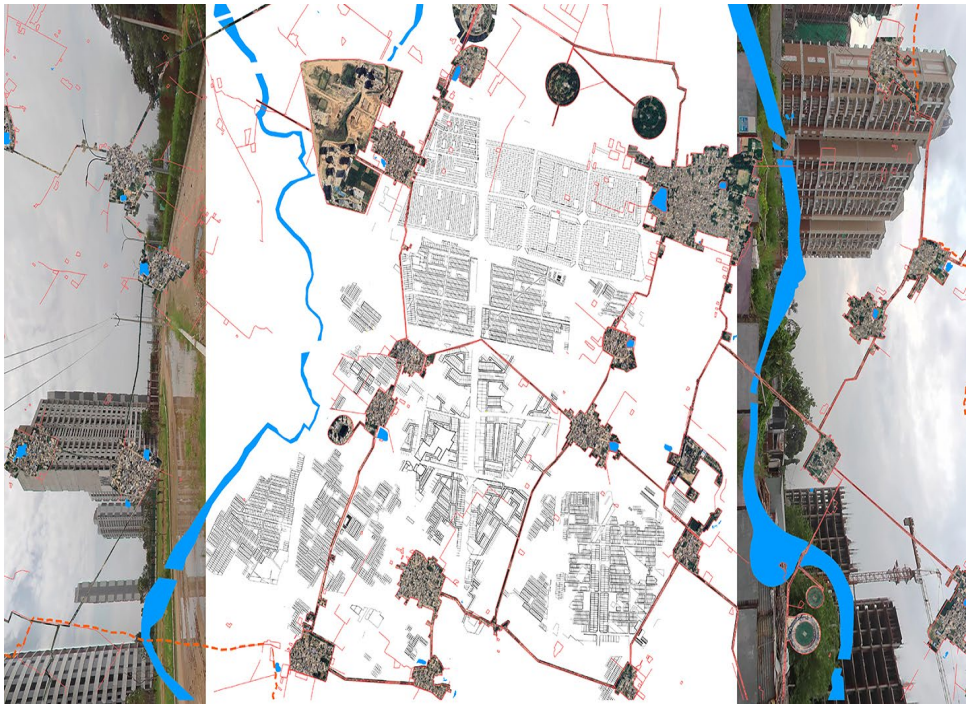

Figure 2. New Chandigarh.

Uneven geographical conditions do not merely arise out of the uneven patterning of natural resource endowments and locational advantages, but, even more importantly, are produced by the uneven ways in which wealth and power themselves become highly concentrated in certain places by virtue of asymmetrical exchange relations.[12]

Uneven geography in the collective city today is a byproduct of the modernist/ modernization concept in so much that the modernist object resists alteration and transformation. Through Harvey, New Chandigarh creates a concentration of wealth and financial control outside Chandigarh, exacerbating the disuse of the living and working spaces of the original plan. Although the original plan, created by European architects through an orientalist lens that Said proposes is unoriginal, local architects and designers were at that time in search of an ideal space.[13] The new plan for the new city shows no ideal other than finance and real estate division.

Smart City

As rapid urbanization transforms the landscape around and outside the Tri-City, officials rebrand Chandigarh as Smart City. More generally, the major components of the smart city- innovations in governance, technology, economy, and sustainability appear in multiple definitions of an emerging trend, and are more broad than the simpler deployment of technology through other areas of daily life.[14] When designed and originally built, many components of the 1950s city fall within these general categories. Innovations in housing, local construction methods, road networks and neighborhood centric design, green belts across the city, education and law, although stemming from orientalist positions, create a smarter city without the term, deploying a combination of modernist and garden city planning. Le Corbusier's V roads, however, are a clear impediment, blocking daily pedestrian and bike flow.

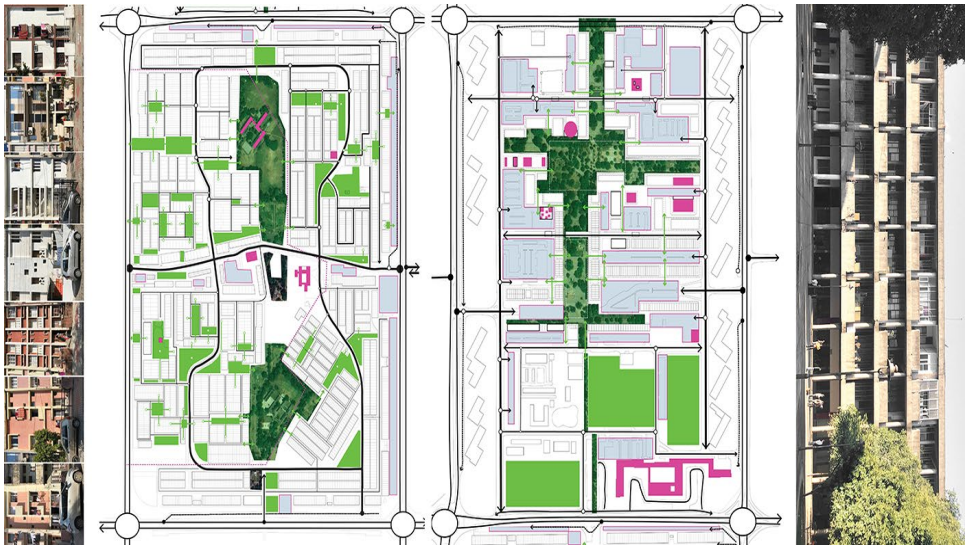

Figure 3. Sectors 22 (left) and 17 (right).

Sectors 22 and 17

As the region's urban footprint rapidly expands, smaller but important areas exist for future development and urban connectivity. Sector 22, the prototype neighborhood, is the first opportunity for testing schools, public and private housing, clinics, a cinema and commercial space.[15] More than architecture types, the sector explores networks of daily life, some planned by administrators.[16] Half of Sector 22 is designated a Heritage Zone,[17] preserving public housing and education structures.

Rigid application of heritage here resists flexible use and incremental growth although flexibility is a main element of the English Town Plan framework. Openings exist as capital development skips possibilities outside the framework of the plan. Outdated building and environmental technologies render most of these important works of architecture designed by Max Fry, Jane Drew and Pierre Jeanneret obsolete, creating demand outside the established city. These structures should be open to interpretation and alteration as the neighborhood's needs change. Privately developed housing and half of the sector falls outside a heritage zone. New housing types can more easily address contemporary life and needs while following the original plan of small residential streets and linked green networks in support of the Smart Chandigarh agenda.

Figure 4. Sectors 22 (left), 17 (right), and the V between (center).

The commercial and local government center of the city, Sector 17, is in disuse as areas outside the original city develop larger new commercial properties unburdened by existing conditions. Most of

the sector is constructed by an extension of a single bay module collectively forming long four level concrete frame buildings facing loose pedestrian plazas and parking lots. The modernist, abstract composition of urban space is altered and animated by the informal, unsupported by local officials,[18] but illustrating a resilience of community. These areas are designated as commercial space only, a product of 1950s strict separation of uses. Much of the real estate is vacant, originally planned and still used for multi-level office space above ground level retail. The frame depth, however, supports other uses including residential flats. The challenge for future use of the center at the urban scale lies in the disconnection to the remaining city. The center is separated from the edge of the sector by large parking lots and a discontinuous road network. Sectors 17 and 22, although adjacent, have no connectivity in that the V2 and V3 have no break in the direction of travel- illustrated in figures 3 and 4.

Richard Sennett, in a critique of the American grid, writes "…this pattern, when repeated often enough, loses the power of designating the character of specific places and of their relationship to the larger city,"[19] and accidentally channels Sector 17. However, the module and unrelenting slipped grid are the precise character of place and unique, only in need of alteration or adaption in the moment of capital expansion. A planned underground metro through the city with stops in the sector gives promise for connectivity and use beyond the difficult road network and individual parking. Multiple and hybrid uses, replanning parking and accessibility between the center and the edge of the sector can reanimate the center of the city.

CONCLUSION

The modernist object city, a product of complex colonial-local political and spatial structures, resists change although the physical plan is designed for flexibility and adaptation. Form, heritage, and obsolete building technologies act together to force much larger scale spaces of capital and informal urbanism, expanding the extra-urban territory of the region in lieu of more difficult inner urban development. The city now competes for investment with newer, adjacent formal and irregular urban space. In partial obsolescence, the original sectors, or neighborhoods, have value for future development, not in their zoned use, but in the hybridity of daily life, particularly shown in Sector 22. Careful replanning original public structures and housing of Sector 22, rethinking open space of Sector 17, paired with public transportation networks beyond the V, supports an open, adaptive, complex city, in line with contemporary digital smart city initiatives and unique history.

NOTES

[1] Rudyard Kipling, *Her Majesty's Service*, (London: Routledge, 1894), 6.
[2] Manu Goswami, *Producing India: From Colonial Economy to National Space*, (Chicago: University of Chicago Press, 2013), 132.
[3] Vikramaditya Prakash, Chandigarh's *Le Corbusier: The struggle for modernity in Postcolonial India*. (Seattle: University of Washington Press, 2002), 33.
[4] Norma Evenson, *Chandigarh, (*Berkeley: University of California Press, 1966), 6.
[5] Kenneth Frampton, Le *Corbusier, (*New York: Thames & Hudson, 2001), 187.
[6] Edward W. Said, Orientalism*,* (New York: Pantheon Books, 1978), 60.
[7] Le Corbusier. *Edict of Chandigarh*. Unknown date. Print, 36" × 36". Chandigarh City Museum.
[8] Ankit Bansal, Tripta Goyal, and Har Amrit Sandhu. "Analysis of Congestion Using Advanced Traffic Instruments-A Case Study of Chandigarh (India)." *Research Journal of Engineering and Technology* 9, no. 4 (2018): 355. https://doi.org/10.5958/2321-581x.2018.00048.x,
[9] Prakash, 36.
[10] Rem Koolhaas, *Generic City*, New York: (Monacelli Press, 1995), 1255.
[11] "New Chandigarh Master Plan," Greater Mohali Area Development Authority, accessed January 26, 2024. https://gmada.gov.in/sites/default/files/new_chandigarh_plan.pdf.
[12] David Harvey. *Spaces of Global Capitalism,* (London: Verso, 2019), 32.
[13] Balkrishna V. Doshi, "The Acrobat and the Yogi of Architecture," in *Talks by Balkrishina Doshi,* (Ahmedabad: Vastu-Shilpa Foundation for Studies and Research in Environmental Design, 2019), 16.
[14] Houbakht Attaran, Nahid Kheibari, and Davoud Bahrepour. "Toward Integrated Smart City: a New Model for Implementation and Design Challenges," GeoJournal, 87 (2022), 1-16. doi: 10.1007/s10708-021-10560-w.
[15] Iain Jackson, "Maxwell Fry and Jane Drew's Early Housing and Neighbourhood Planning in Sector-22, Chandigarh." *Planning Perspectives* 28, no. 1 (January 2013), doi: 10.1080/02665433.2013.734993.
[16] Prakash, 34.
[17] Kiran Joshi, *Documenting Chandigarh: The Indian architecture of Pierre Jeanneret, Edwin Maxwell Fry, Jane Beverly Drew*. (Ahmedabad: Mapin Publishing and Chandigarh: Chandigarh College of Architecture, 1999), 262.
[18] Sandhu Kudrat, "Chandigarh's Sector 17 Struggles with Poor Infrastructure: Chandigarh News." The Times of India. July 30, 2024. https://timesofindia.indiatimes.com/city/chandigarh/chandigarhs-sector-17-struggles-with-poor-infrastructure/articleshow/111045628.cms.
[19] Richard Sennett, *Conscience of the eye: Design and social life of Cities*, (London: Faber, 1993), 49.

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AN ASSESSMENT OF UNIVERSAL ACCESSIBILITY IN INSTITUTIONS OF HIGHER EDUCATION IN INDIA: A CASE STUDY OF SCHOOL OF ARCHITECTURE

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INTRODUCTION

UN 2030 agenda for sustainable development, lays out standards and principles, for planning and development of urban areas, and has identified 17 goals, wherein goal number 10 and 11 emphasize on reduced inequalities (aspects of gender and disability) and making cities and human settlements *inclusive, safe, resilient and sustainable* respectively.[1] Sustainable Development Goals (SDG's) envisage that cities must develop in sustainable and inclusive manner and should facilitate social, economic and environmental growth of cities.

United Nation Convention on the Rights of Persons with Disabilities, (UNCRPD with the purpose to promote and protect rights of people with disabilities was adopted in the year 2006.[2] India is the signatory to this convention and has reviewed its policies, plans, programs to protect rights of persons with disabilities((PwDs).

As per 2011 census report,[3] nearly 27million people in India have some form of disability including visual, hearing, speech and loco-motor disabilities, mental illness, mental retardation, multiple disabilities to name a few.

DISABILITY LEGISLATIONS IN INDIA

India's Rights of Persons with Disabilities Act' 2016,[4] is the governing act in place to ensure full participation and equality to PwDs in mainstream including education and employment.

This Act lays liability on education institutions to provide inclusive education without any form of discrimination among the students based on their varied abilities including access to the buildings and facilities. This Act also provides for reservation of seats for PwDs, in education and employment.

To achieve universal accessibility Government of India has launched a nationwide flagship program, "Accessible India Campaign" in the year 2015,[5] which envisions for an inclusive society that enables persons with disabilities to gain access to equal opportunities, to live independently, lead a productive, safe, respectable lives and to participate fully in all aspects of life.

NEED FOR STUDY

Disability is a complex subject and is not just a health problem. It is the interaction between individuals with a health condition and environmental factors such as negative attitudes, inaccessible public spaces and limited social support.[6] The built environment disables people if it is not designed or constructed to address their special needs.

'Mobility impairment' is a common type of disability, and has two broad categories.[7]

Ambulant and non- ambulant disabilities; Persons with ambulant disabilities may use assistive devices like crutches, cane, walking frames, rollators, etc. while some may move without assistive devices. Persons with non- ambulant disabilities may use wheeling devices like wheelchairs (manual, powered), tricycles or ground mobility devices for their mobility needs.

The common barriers that may be gruesome for ease in movement for mobility impaired persons are-

- Changes in floor level.
- Lack of space for movement and/or turnings
- Faulty location or operation of a door, so opening might be difficult.

The study focuses on assessment of accessibility in built environment to identify common barriers, which hinders seamless functioning and participation of mobility impaired users in architectural education institutes in India.

Accessibility is defined as "the extent to which facilities are barrier free and useable by persons with disabilities, including wheelchair users". "Barrier Free Design" is a concept which removes obstacles in a space or product accommodating people with different disabilities. Universal design, design for all or inclusive design approaches, aim at design of products and built environment with maximising its benefits to a wider group of users having wide range of abilities.[8]

ACCESSIBLE BUILT ENVIRONMENT IN ARCHITECTURAL INSTITUTIONS

According to National institute ranking framework (NIRF), India's higher education system stands third largest in the world, in terms of students, next to China and the United States.[9] In future, India's higher education sector is anticipated to grow with increase in the number of universities/university level Institutions & Colleges. As per the report of "*All India Survey on higher education (AISHE)," 2020-21*, Ministry of Education, Government of India,[10] enrolment rate of students with disabilities in higher education is very low in India. Improved built environment accessibility in higher educational institutes may prove an effective catalyst in improving the enrolment statistics for PwDs and may help these students in leading an independent life.

Within the scope of higher education, architectural education institutes make a strong case to study. There are about 466 architectural education institutes in India,[11] making their presence felt in higher education sector. Students enrolled in these institutes are future designers of the built environment; their sensitization on accessible built environment is important. The built environment of architecture education institutes acts as living lab for students to learn about design solutions pertaining to accessibility needs of PwDs. These campuses must offer seamless connectivity from the campus entrance to all facilities and associated spaces.

ASSESSMENT OF UNIVERSAL ACCESSIBILITY

Among all prevailing methods of accessibility evaluations, checklist driven evaluation method is most prevalent and based on existing local guidelines and standards.[12] In the present study a combination of checklist evaluation method and holistic evaluation (post occupancy) has been used.[13] The outcomes of these building evaluations include lessons for designing future buildings and insights to improve existing buildings.

METHODOLOGY

This study uses a checklist with 31 parameters based on prevailing accessibility guidelines and standards in India.These parameters are both qualitative and quantitative in nature. Post occupancy evaluation of the existing campus is carried with visual inspection by a team of stakeholders including mobility impaired users and design experts. The observations are recorded as photographs, videos and annotations on building plans.

The formulation of checklist involves an online survey consisting of a questionnaire (google form), which was sent to nearly 200 stakeholders, all PwDs, including mobility impaired and wheelchair user students in higher education institutes in India. The questionnaire was framed within the scope of "Harmonized guidelines and space standards for universal accessibility in India 2021".

Participants of this survey were asked to rate identified accessibility parameters in three categories *(essential, important and not important, with assigned weights of 9,5,1 respectively)* based on participant's personal experience in built environment of their institutes. Responses from 42 mobility impaired students were recorded and analysed to ascertain their needs for accessibility in their campus. To know the relative importance of 31 parameters, weighted average for each is calculated. each parameter depending on its weighted average is assigned value between1 to 3, with essential parameters (high WA) gets 3 value and not important (low WA) gets 1 value as indicated in table-1.

S. No.	PARAMETERS	Response categories			Weighted Average (A*9+B*5+C*1) /SUM (9+5+1)	Assigned value
		Essential (9)	Important (5)	Not important (1)		
		A	**B**	**C**	**(WA)**	
1	Ease of access at campus entry point/s.	26	12	4	19.87	**3**
2	Accessible and convenient external access routes/pathways/ footpaths.	22	19	2	19.67	**3**
3	Accessible parking, passenger alighting points and drop off areas.	23	16	3	19.33	**3**
4	Accessibility to open spaces, parks, recreation and other activity spaces.	22	18	2	19.33	**3**
5	Presence of street furniture/ resting facilities along access routes/ outdoor spaces.	25	12	5	19.33	**3**
6	Convenient kerb ramps for access to footpaths and street crossings.	22	17	4	19.13	**3**
7	Adequate illumination and lighting in external areas.	22	17	3	19.07	**3**
8	Convenient ramps provided at level differences on access routes.	21	18	3	18.80	**3**
9	Provisions of hand rails/ grab rails at convenient heights on both sides along ramps/stepped routes.	23	12	7	18.27	**3**
10	Provision of non- skid and non glary surface finish and color contrasts in external surfaces.	23	12	7	18.27	**3**
11	Presence of clear and legible signage/ street signs/ symbols for way finding /identification / information at strategic locations	22	14	6	18.27	**3**
12	Convenient and easily identifiable entry/s to the building/s.	20	18	4	18.27	**3**
13	Wide and unobstructed passages/ corridors in buildings for horizontal movement.	20	17	5	18.00	**2**
14	Lifts/ elevators of adequate size and accessible design at convenient locations for vertical movement.	20	17	5	18.00	**2**
15	Presence of approachable and identifiable ramps for vertical movement.	17	23	2	18.00	**2**
16	Stairs for vertical circulation or reaching upper floors	21	14	7	17.73	**2**
17	Provision of railings, hand rails/ grab rails on ramps/ corridors/ lifts/ washrooms.	19	18	5	17.73	**2**
18	Provision of adequate and accessible washroom facilities.	18	20	4	17.73	**2**
19	Provision of easily approachable convenient and hygienic drinking water facilities.	21	13	8	17.47	**2**
20	Convenient and approachable doors/ window designs and operating mechanism	18	18	6	17.20	**2**
21	Conveniently approachable reception/information/waiting.	17	20	5	17.20	**2**
22	Easily accessible and suitably designed student's common rooms / lobbies etc.	19	16	7	17.20	**2**
23	Easily accessible and suitably designed administrative offices.	17	19	6	16.93	**1**
24	Easily accessible and suitably designed class /lecture /seminar /tutorial rooms.	18	17	7	16.93	**1**
25	Easily accessible and suitably designed computer labs/ laboratories /workshops etc.	19	14	9	16.67	**1**
26	Easily accessible and suitably designed library and reading rooms.	17	18	7	16.67	**1**
27	Easily accessible and suitably designed auditorium / assembly spaces and conference facilities	17	18	7	16.67	**1**
28	Easily accessible and suitably designed indoor sports and exercise areas with accessible washrooms /changing facilities.	17	17	8	16.40	**1**
29	Easily accessible and suitably designed cafeteria or eating places in campus	15	20	7	16.13	**1**
30	Easily accessible and suitably designed stationary/ convenience shops.	16	17	9	15.87	**1**
31	Easily accessible and suitably designed Bank/ATM's/Post offices	13	21	8	15.33	**1**

Table 1. 31 Identified accessibility parameters with assigned value points based on survey outcomes.

INTRODUCTION OF THE CASE STUDY

This Institute was established in the year 1999 as first self- funded architectural education institute in Jaipur, India. The Institute has an annual Intake of 140 students in undergraduate program (5 years duration) and 20 students (2 years duration) in post graduate program. Hence, accommodates nearly 740 students on its campus. The number of faculty members is nearly 74 and nonteaching staff requirement is around 30, making a total of 844 users in this campus. Since this is a residential campus with hostel facilities for both boys and girls, the housekeeping and service staff may also be added.

The buildings have come up in a phased manner, with many extensions and additions of new buildings in the campus over a period of last 25years.

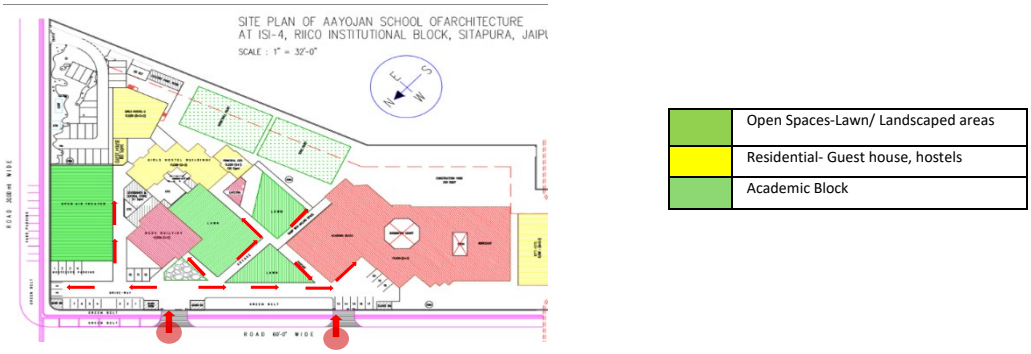
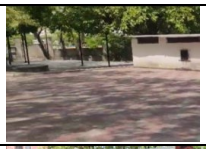
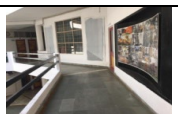
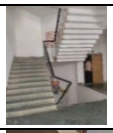
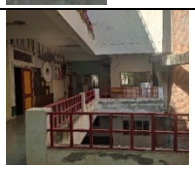
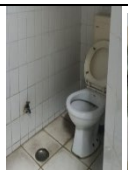
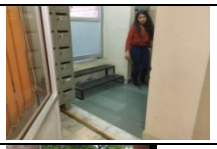
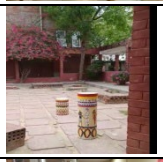
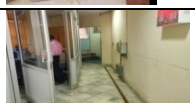


Figure 1. Site plan of case study with zoning layout in color representation

ASSESSMENT OF CASE STUDY

S.No.	Accessibility parameters	Value from table -1	Value assigned to Case study	Description	Observations/recommendations
1	Ease of access at campus entry point/s.	1	1		The campus entry has separate gate for pedestrian entry. Ramp between access road and site entrance is satisfactory.
2	Accessible and convenient external access routes/pathways/ footpaths.	3	0	 	External access routes are wide, but have steps without ramps, Ramps of gradient between 1:12 to 1:20 must be added at every level difference.
3	Accessible parking, passenger alighting points and drop off areas.	3	0		No demarcated accessible parking facilities available. Accessible parking must be provided as/norms with proper identification signage within 30 meter distance from accessible entrance of building/s.

4	Accessibility to open spaces, parks, recreation and other activity spaces.	3	3		Outdoor recreation areas are provided on accessible routes.
5	Presence of street furniture/ resting facilities along access routes/ outdoor spaces.	3	0		Street furniture as masonry platforms are provided in courtyards with uneven floor. Properly designed outdoor furniture must be added on accessible routes.
6	Convenient kerb ramps for access to footpaths and street crossings.	2	0		Kerb ramps as per standards must be added at level differences between footpaths and vehicular access routes.
7	Adequate illumination and lighting in external areas.	1	1		Adequate illumination and lighting is provided in external areas.
8	Convenient ramps provided at level differences on access routes.	2	0		Ramps are provided only on few of the access routes, must be provided on all routes with steps/ level difference.
9	Provisions of hand rails/ grab rails at convenient heights on both sides along ramps/stepped routes.	2	0		No provision of handrail along ramps and footpaths, which are strongly recommended as/norms.
10	Provision of non- skid and non glary surface finish and color contrasts in external surfaces.	1	1		External pathways and access routes fulfil the criteria.
11	Presence of clear and legible signage/ street signs/ symbols for way finding /identification / information at strategic locations	1	0		The signage is provided at few locations only, signage mounting heights and design must be as/norms with provision of international symbol of accessibility at strategic locations.
12	Convenient and easily identifiable entry/s to the building/s.	3	0		Main entrance has high plinth with steps access only. Provision of convenient ramp with handrails and slope within 1:12 to 1:20 is recommended.
13	Wide and unobstructed passages/ corridors in buildings for horizontal movement.	2	2		The passages and corridors in building are satisfactory.
14	Lifts/ elevators of adequate size and accessible design at convenient locations for vertical movement.	3	0	No lifts/elevators	No elevators are installed for vertical movement. Accessible lift of minimum 1500x1500mm car size with 900mm wide door and car controls within reachable height must be added at identifiable location.
15	Presence of approachable and identifiable ramps for vertical movement.	3	0		Building has G+2 storey structure with a lower ground floor, there is one make shift ramp for reaching lower ground floor only. Suitably located and designed ramp must

					be added for vertical movement in absence of accessible lifts.
16	Stairs for vertical circulation or reaching upper floors	3	3		Stairs are as/accessibility standards.
17	Provision of railings, hand rails/ grab rails on ramps/ corridors/ lifts/ washrooms.	2	0		Design of hand rails is not as/ norms. Continuous gripping handrails of adequate size must be provided on both sides of the steps/ ramps at two heights, 840-900mm and 600-700mm from floor level.
18	Provision of adequate and accessible washroom facilities.	3	0	 	Wash rooms do not adhere to accessibility standards. At least one unisex accessible washroom is recommended on each floor. Wash rooms must have adequate size for wheelchair movement with grabrails as/norms.
19	Provision of easily approachable convenient and hygienic drinking water facilities.	1	0	 	Height of drinking water spouts are higher than required. Easily accessible and operable drinking water spouts at two levels must be provided**.**
20	Convenient and approachable doors/ window designs and operating mechanism	1	1		Doors are wide enough without any obstruction on floor. The doors /window design and operating mechanism must be as/norms.
21	Conveniently approachable reception/information/waiting .	1	0		Reception desks are not accessible, Its location must be close to accessible entrance and waiting lobby. Its design to be modified as/norms.
22	Easily accessible and suitably designed student's common rooms / lobbies etc.	3	3		Outdoor courtyard spaces are used as common areas, rough/uneven flooring makes it inaccessible. These spaces must have levelled floors.
23	Easily accessible and suitably designed administrative offices.	1	1		These areas are located on lower ground floor accessed through a make shift ramp.
24	Easily accessible and suitably designed class /lecture /seminar /tutorial rooms.	3	0		Most of these spaces are located on upper floors, accessed only by stairs. Instructional spaces must preferably have levelled floors or suitable means for accessibility. Furniture layout must be adjustable and allow circulation space for wheelchair**s.**

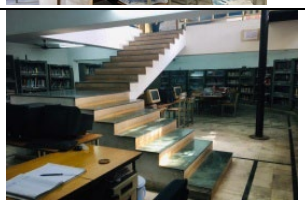
25	Easily accessible and suitably designed computer labs/ laboratories /workshops etc.	2	0		Some of these spaces are located on upper floors, which are inaccessible. Suitable access is recommended to all spaces.
26	Easily accessible and suitably designed library and reading rooms.	2	0		Library has two levels connected only by stairs, the furniture is also not as/accessibility norms. Upper level of library must be connected by accessible means. Furniture must be adjustable and bookshelves height shall be within 1220mm. Book issue counters to be accessible for wheelchair users too.
27	Easily accessible and suitably designed auditorium / assembly spaces and conference facilities	2	0		The assembly space is located in the central courtyard at lower ground. The stage is raised with stepped entry only. Raised stage/backstage must have ramp access.
28	Easily accessible and suitably designed indoor sports and exercise areas with accessible washrooms /changing facilities.	2	0		Indoor sports facilities are located on different floors, and are inaccessible. Indoor sports facilities shall be made accessible.
29	Easily accessible and suitably designed cafeteria or eating places in campus	2	0		Cafeteria is located in outdoor area and is inaccessible. All eating places must be located on accessible routes and furniture layout / counters heights to be convenient.
30	Easily accessible and suitably designed stationary/ convenience shops.	3	0		Stationary shop has a raised threshold almost 120mm high, which restricts movement of mobility impaired persons. Threshold must be removed or ramp must be added.
31	Easily accessible and suitably designed Bank/ATM's/Post offices	1	0	No such facility on campus	There is no such provision within the campus. These facilities located on accessible routes are recommended.
	Total Score	**65**	**16**		
	Accessibility Percentage	**16x100/65= 24.62%**			The accessibility in the campus may be improved as/above recommendations.

Table 2. Assessment of existing built environment accessibility in case study institute with recommendations for improvements

DISCUSSION

The accessibility percentage of the case study institute is 24.62%, any score below 50% (minimum Passing) is very low. This low accessible percentage may be attributed to reasons such as- this institute was established in the year 1999. When this building was constructed the accessibility codes and standards were not updated in India. Built environment accessibility awareness has grown phenomenally in last two decades. Post UNCRPD, the country has seen many changes in its legislations, government programs and policies, and as a result, built environment accessibility guidelines have been revised and updated. The case study Institute has seen this transition and has done some retrofitting efforts to meet accessibility requirements partially. The buildings in campus

have been added in phased manner, building blocks therefore do not have seamless connectivity. The budgets for this self- funded institute could also be a constraint. Building design standards are based on normal healthy human body, guidelines and standards for differently abled human anthropometrics are comparatively recent and its awareness among building designers is also questionable. In absence of physical access within the campus PwD students abstain from taking admissions in these institutes, which is a loss for the institute as well. Building design approval authorities / local bodies must take up built environment accessibility as a mandatory clause, just like fire safety approvals, to ensure its inclusion.

CONCLUSION

The institute authorities must take up the task of improving built environment accessibility on priority basis. Additions/ improvements in following accessibility elements will improve the accessibility in the campus quite considerably and must be taken up in the first phase-

External Environment

1. Accessible and convenient external access routes/pathways/ footpaths,
2. Accessible parking and Passenger alighting points and drop off areas,
3. Presence of street furniture/ resting facilities along access routes/ outdoor spaces,
4. Convenient kerb ramps for access to footpaths and street crossings (slope between footpaths and vehicular routes)
5. Convenient ramps provided at level differences on access routes.

Internal Environment

1. Adding lift/ramps for upper floors improves the accessibility percentage considerably as accessibility to class rooms/ labs/library/ indoor sports etc. are dependent on the vertical connectivity.
2. Accessible wash rooms must be added in the campus. (minimum one gender neutral washroom may be added at accessible location)
3. Entrances to the buildings must be improved.

Apart from improving the accessibility in the built environment, architectural education institutes must introduce the subject of universal accessibility in teaching curriculum and helping the students to understand the issues commonly faced by persons with disabilities pertaining to built environment. If the future designers are sensitized about the subject, we may expect our buildings and environments to be designed for safety and usable by all.

NOTES

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THE REGENERATION OF MINOR CENTRES: FROM PLANNING SCENARIOS TO PROJECT PRACTICES

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INTRODUCTION

Minor historic centres in Italy represent a widespread heritage in which a strong relationship between the built environment and natural environment is evident.[1] These centres, already recognized as a repository of historical and cultural values, seems to express today under the new paradigms of sustainability and resilience a potential that can be activated through compatible regeneration processes. The doctoral research is funded by the Territorial Cohesion Agency within the framework of the National Strategy for Inner Areas (SNAI) with the aim of defining, implementing, studying and monitoring local strategies for sustainable development in coherence with the UN 2030 Agenda, and in particular the ecological and digital transition, the fight against social and educational inequalities, the strengthening of economic activities and administrative capacities for the specific context of the Abruzzo inner area Giovenco Valley and Roveto Valley. In 2014, the Italian government introduced the SNAI initiative, which intends to address the issues of marginalisation and depopulation in what has been defined as inner areas by implementing local development projects. Inner areas represent a specific subset of "minor" Italy, they are Alpine or Apennine areas characterised by different, though partly interconnected, forms of marginality, from geographical to economic and social.[2] The aim of the research, carried out adopting an interdisciplinary perspective and according to a cross-scale approach, is to define an operational tool to support the policymaking, planning and intervention actions, by local authorities and stakeholders, for regenerative processes capable of combining the heritage preservation with cultural and economic enhancement of the area, tourism promotion with natural resources protection. This paper, considering the first outcomes of the research, proposes a critical overview on the current Italian cultural, regulatory, and strategic framework on the topic of regeneration of minor centres from which a significant divergence between implementation policies and practices seems to emerge. To outline this framework, the research was divided into three phases. The first involved the selection and critical analysis of the main European and national policy documents, regulatory references and ongoing programs. The second surveyed the results of the "Villages Attractiveness" initiative, funded by the Ministry of Culture for the National Recovery and Resilience Plan, which is nowadays the main source of funding for regeneration projects in minor centres. In the third phase, the contents of these projects, were analysed in the detail and collected to build a database. From this analysis what seems to emerge is, in the light of the large number of planning and financing instruments outlining strategic intervention assets, there is a lack of effective and coordinated planning of actions that on a tactical level are capable of launching, promoting and

supporting them in a long-term sustainable development perspective. From this perspective, the definition of an operational tool capable of controlling the regenerative process that is sustainable and respectful of the peculiarities of the investigated heritage appears coherent and necessary.

THE RESEARCH METHODOLOGY

The research methodology is structured in three macro-phases. The first one focuses on the identification of the field of investigation: the regeneration of the widespread system of minor centres in inner areas; the state-of-art analysis about the regeneration topic, reconstructing the cultural framework using the main guideline documents and scientific literature, reassembling the fragmented national and regional legislative Italian framework, analysing the primary ongoing experiences related to the regeneration of minor centres, and outlines the theoretical and operational criticalities that the cultural framework and current practices highlight. The second phase, starting from the outlined critical framework and from the specificities posed by the research operational field, defines a hybrid approach based on the adoption of criteria and concepts capable of ensuring critical analyses and multi-level evaluation methods, which include the territorial, settlement, building and multi-sectoral scales with the adoption of the concept of "built environment" as the physical, social and economic system as a whole.[3] After the definition of the methodological process, this phase is dedicated to the construction of an easy-friendly operational tool, which, based on parameters and indicators, can be used in both predictive analysis - for the definition of regenerative strategies and guidelines - and postdictive analysis - for the evaluation of the effectiveness of measures and interventions. The tool is intended to support local authorities and operators to identify, with respect to planning scenarios, opportunities and project possibilities that can implement strategies in order to initiate controlled, adaptive and sustainable regenerative processes capable of combining the strategy of heritage preservation with cultural enhancement, economic development and resource protection. The last macro-phase consists of the tool validation on the identified case study, the Giovenco Valley and Roveto Valley inner area and the analysis of the results.

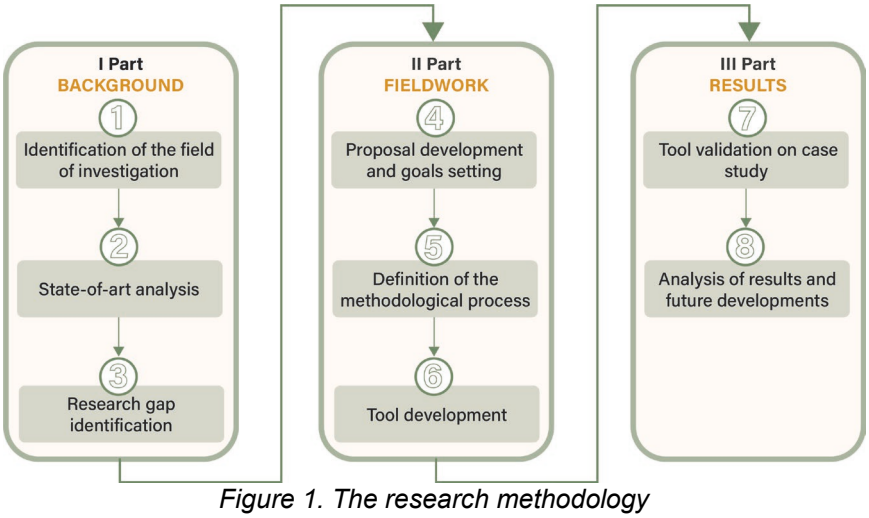

Figure 1. The research methodology

THE REGENERATION FRAMEWORK

The concept of regeneration began to emerge in urban contexts in the 1980s in both the United States and the United Kingdom as a response to the challenges posed by deindustrialization.[4] However, it gained greater significance after the global financial crisis, evolving into an integrated approach

aimed at addressing urban issues and improving economic, physical, social, and environmental conditions in a long term way.[5] This process involves material, human, and financial resources, and engages a wide range of stakeholders.[6]

The first European regeneration experiences were the Urban Pilot Projects, 32 city regeneration projects financed between 1989 and 1993 with the aim of promoting the development of areas with social and environmental problems, improving urban quality and revitalising historic centres.[7] The European cultural reference is the 2010 Toledo Declaration, which defines regeneration as a planned process that combines actions aimed at the physical recovery of buildings and urban spaces with sectoral initiatives of an economic, social, and environmental nature, emphasizing the need for an integrated, holistic and multidimensional approach to regeneration.[8] Internationally, regeneration finds its primary reference in the United Nations Sustainable Development Goal 11, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable.[9]

In Italy there is no national law that establishes the definition of regeneration and through which interventions and tools should be implement it. Regional legislators have anticipated the national one by enacting specific regional laws on regeneration or by including within the laws on land planning articles dedicated to regeneration. The analysis of these laws shows that each region has developed its own definition of regeneration and identified different tools and interventions for implementing it. It is important to note that regeneration is often limited to urban peripheral areas; in fact, only a few regions allow interventions in historic centers.

The state-of-art analysis shows that there is no agreed definition of regeneration, and it is still unclear through which instruments regenerative processes can be activated for the widespread system of minor centres.

THE REGENERATION IN THE NATIONAL RECOVERY AND RESILIENCE PLAN

The most important funding measure currently in place for the regeneration of minor centres in Italy is the intervention called “Villages attractiveness” included in the National Recovery and Resilience Plan (PNRR) and promoted by the Ministry of Culture (MiC). This funding falls under the M1C3 component “Tourism and Culture 4.0” and it aims to strengthen and rebalance the connections and links between urban areas and shrinking areas. In order to stop the depopulation trend of these centres, it achieves this by funding initiatives for the revitalisation and enhancement of the historical, architectural, and cultural heritage of minor centres. These initiatives integrate heritage protection with social and economic revitalisation as well as employment revitalisation. One billion euros has been invested, and it has been done so through two funding lines. The key distinctions between the two intervention lines are presented in Table 1.

Intervention line	Line A	Line B
Projects funded	21 projects funded	289 projects funded
Budget	€ 420M (20M for each project)	€ 380M (max. 1,65M each)
Target	Abandoned or neglected historical village	Small historical municipalities
Requirements	To be selected must possess some specific characteristics	Every municipality with less than 5.000 inhabitants can apply
Selection procedure	Each region and autonomous province have chosen the procedure for the selection	Public tender for the selection

Table 1. The two lines of interventions

Intervention line A

In order to develop social and economic regeneration initiatives in neglected or abandoned historic villages, the first line of intervention A supports 21 projects of particular relevance - 20 million euros each - one for each region or autonomous province. A historic village is defined as a small settlement that has maintained the recognizability of the historical settlement structure and the continuity of the building fabric that is predominantly isolated and separated from the urban centre and does not coincide with the historic centre or portions of it.[10] The Regions or Autonomous Provinces had the authority to select the winning projects, which included implementing various protocols for borough designation that had differing requirements and timelines. Only areas with a significant depopulation index and fewer than 300 residential housing units were eligible for action, according to the guidelines. Additionally, the villages had to meet one of the following requirements: they had to be situated in a protected area, in an area of high landscape value, be part of a UNESCO site, have recognized itineraries, be part of a network of municipalities, be the subject of other recognitions of national or international interest, or be the subject of other PNRR-funded actions. The proposal aims to realize a comprehensive initiative that will facilitate the establishment of new cultural, tourism, social, and research-related functions, infrastructures, and services. This initiative will also be able to create opportunities for the revival of employment, particularly for younger generations, and will encourage renewed residential attractiveness for both locals and visitors, indicating a better quality of life as a result of the benefits of a setting that combines innovation, new technologies, and a green economy with traditional values, the landscape, and culture.

Intervention line B

Supporting local revitalisation initiatives for small historical municipalities is the aim of intervention line B. Municipalities classified as small historical municipalities are those having a population of less than 5,000 people overall, with at least one historic village that can be recognised by its original morphological and typological features, as well as a significant presence of cultural and environmental heritage.[11] The 580 million euro total resources are divided into 380 million for regeneration projects and 200 million for micro, small, and medium-sized businesses (profit and non-profit) that are already operating in the selected municipalities or want to do so. Eligible interventions are the adaptive reuse and the functional, structural adaptation of public buildings and spaces; interventions for the protection and the enhancement of cultural heritage; the installation of urban furniture, equipment and technological endowments; the implementation of cultural activities and services; the construction of cultural, historical and thematic itineraries and routes to connect and enjoy places of historical and cultural interest; the realisation of cultural promotion initiatives and events; the creation of information systems enabling the management and fruition of places, support actions for the communication and dissemination of information on cultural goods, services and activities.

THE DATABASE CONSTRUCTION

Starting from the initial assumptions made in structuring the research methodology, which involved a hybrid approach utilizing a multi-level evaluation method that consider territorial, settlement, building scales, and multi-sectoral scales, the pilot projects of the intervention line A were evaluated according to the 3x3 matrix, shown in Figure 3, which allows to read the interrelationships between the sectors and levels of intervention. Since there is no existing platform that collects all the information about each project, they were collected, analysed and geo-referenced on QGIS to create an open-access database. On QGIS in addition to geospatial information, two different forms were uploaded, a synthetic one, reporting the general information about the localization of the project, a summary of the

interventions, the intervention scale, the overall results by assessing which area of intervention is prevalent between physical, economic and social, and also information about the SNAI classification and if the village is part of an inner area. The second one is more detailed and shows all the planned interventions and the analysis through the 3x3 matrix. In Figure 3 an example of the two forms is presented: Sanza, the selected village in Campania. An additional post-intervention evaluation form is planned to assess the results of the interventions through performance indicators measuring the level of fragility.

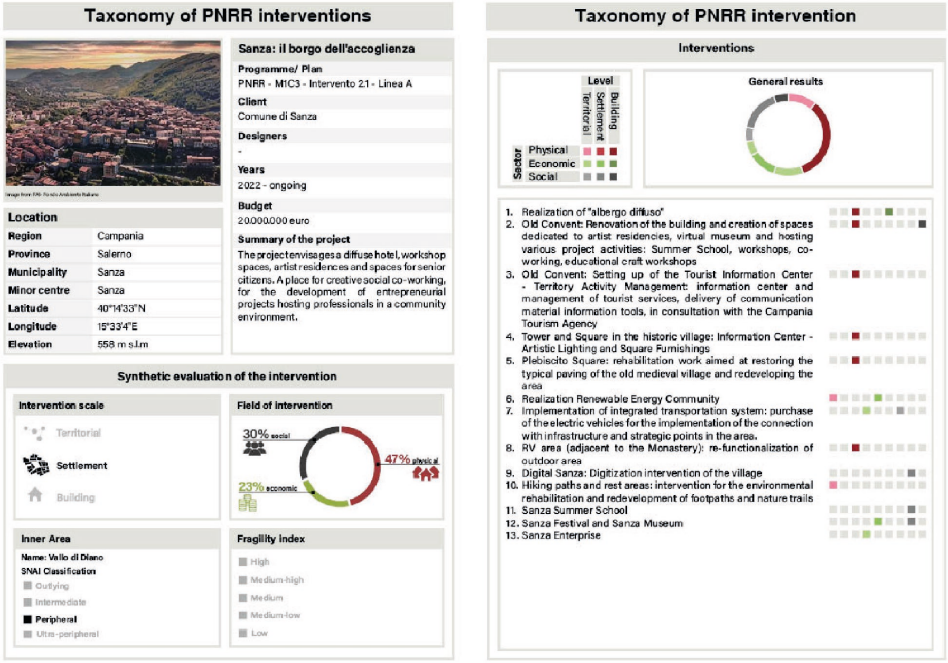

Figure 2. The matrix and Sanza evaluation forms

RESULTS

The overall results of intervention line A indicate that 45% of the interventions focus on the physical sector at the building scale, followed by 13% of economic interventions and 11% of social interventions, both at the settlement scale. Over 157 million euros have been allocated for the recovery and rehabilitation of the built environment, while 27 million euros have been invested in economic revitalization initiatives and 13 million in social interventions. Figure 4 presents the outcomes of each pilot project highlighting a greater degree of intersectoral and multiscalar integration in the central and southern regions, while the north-west shows a clear predominance of physical interventions at the building scale. It is interesting to note that in the pilot projects of Friuli-Venezia Giulia and Aosta Valley the social interventions are more relevant than in the other regions. A particular case is the project promoted by the Tuscany region, which focuses exclusively on physical transformations at both the settlement and building scales.

As line B projects were not yet available, only the general results were analysed. The main point of contention was the disparity in funding between the two intervention lines: 420 million euros were allotted to 21 projects, while 380 million euros were given to 289 small municipalities. However, compared to the first line of intervention, the second one welcomes the participation of small networks, even if limited to a maximum of three municipalities, allowing for a broader territorial perspective and the inclusion of local connections. ISTAT data for 2021 report that there are 5,532

municipalities in Italy with a population of less than 5,000 inhabitants. 1595 applications were received that were deemed suitable, corresponding to 28% of the total, and only 289 municipalities were funded, less than 5% of the total. Figure 5 shows the distribution of financed municipalities, and the number of projects financed in each region compared to the number of applications submitted. The Region that has received the most funds is Sicily with around 42 million for 35 municipalities, followed by Campania with 39 million for 31 municipalities, and then Lombardy and Latium with 33 million each to finance 28 and 29 municipalities respectively. On the contrary, there are Regions that are only receiving funding for one or two projects, such as Abruzzo, Valle d'Aosta and Molise. It is very likely that due to the extremely accelerated timeframe for implementing the PNRR and the short time available to submit an application - the call opened on 20 December 2021 and closed on 15 March 2022 - many small local administrations found themselves unprepared to respond to the call in a timely manner.

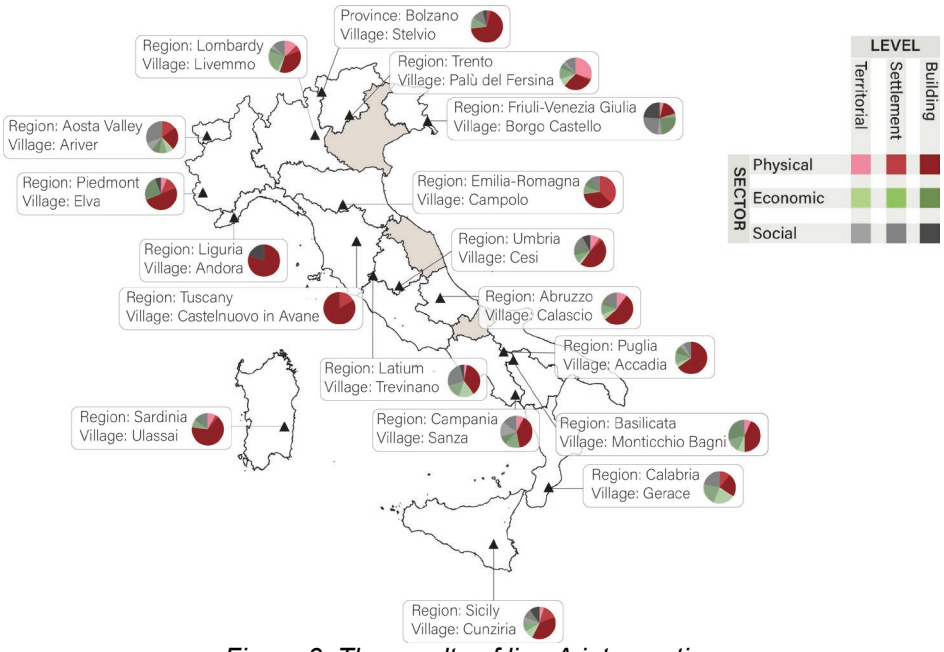

Figure 3. The results of line A intervention

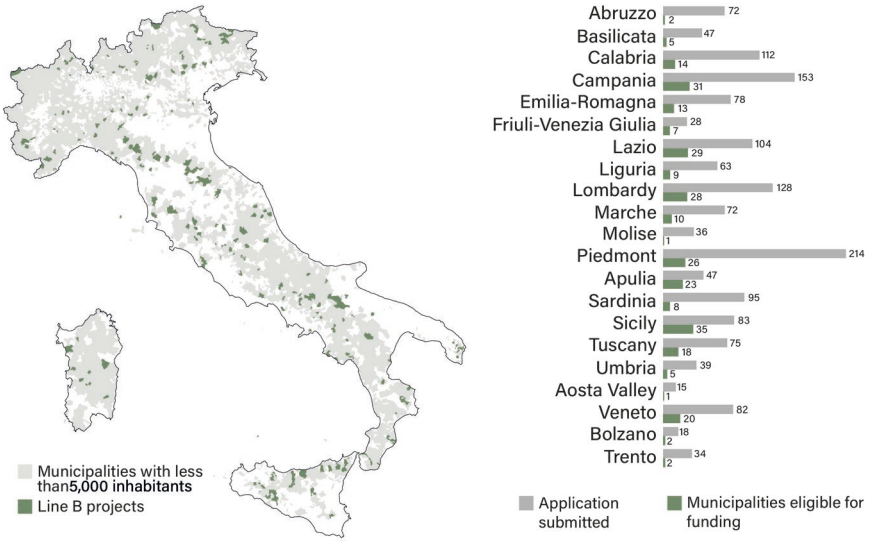

Figure 4. The results of line B intervention

CONCLUSION

Regeneration is now at the centre of public debate, but the term is almost always associated with urban areas and the suburbs of large and medium-sized centres that are in a state of decay. On the other hand, there is still little discussion of the topic in reference to ‘minor’ centres.

In this first phase of the research, some critical elements emerged in light of the state of the art and the survey conducted on current operational practices. The analysis of the laws and the main policy documents shows the lack of a shared definition of regeneration applied to the widespread system of minor centres, the absence of guidelines and tools and a fragmented regulatory framework. From the evaluation of the results of the "Villages Attractiveness" initiative, the most important funding measure currently in place for the regeneration of minor centres, what emerged is that the projects focus mainly on physical transformations without integrated economic and social actions, and they lack long-term vision. The interventions primarily aim to enhanced tourism through the promotion of widespread hotels, museums, residencies for artists and territorial brands. But it is necessary for these places to be re-inhabited and revitalised and this is only possible through the reconstruction of the community that can only take place if the essential conditions are created to allow people to live in these minor centres. Increasing tourist attractiveness through the recovery of buildings to be used as museum spaces, widespread hotels, residences for digital nomads; the creation of cultural events and the enhancement of tourist itineraries are only some of the elements needed to regenerate these places. The promotion of permanent residency is also needed and must be accompanied by the creation of a local economy and social interventions whose aims include the maintenance and care of the territory.[12] The need to resolve these critical issues is the starting point for this research, which aims to define an easy-to-use operational tool based on the characteristics of the heritage under investigation, capable of providing predictive and postdictive evaluations to support sustainable regeneration policies, programmes and projects in the singularity and specificity of the system of minor centres that characterises the territory of the inner areas.

NOTES

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CHARACTERIZATION AND DIAGNOSIS OF SOCIAL HOUSING IN VIANA DO CASTELO: A REPRESENTATIVE ANALYSIS OF PORTUGAL'S SOCIAL HOUSING

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INTRODUCTION

The majority of the Portuguese building stock was constructed after the 1970s.[1] These constructions, often clustered in degraded urban suburbs, present more anomalies and lower construction quality due to the lack of legislation and technical knowledge. Moreover, these buildings are characterized by high energy consumption, living discomfort, and seismic vulnerability. The rehabilitation of buildings, particularly social housing, is crucial to adapt the constructions to current needs, improve energy efficiency, and enhance residents' comfort. This paper focuses on the methodology employed to analyze eight social housing buildings located in Viana do Castelo, Portugal. It is possible to identify similarities in materials, interior organization, and anomalies in the building's envelope by analyzing different social housing projects. This sample can be extrapolated to a broader context of the current state of social housing buildings in Portugal. It is imperative to comprehend this type of construction in order to devise appropriate solutions aiming to enhance the performance of the buildings and the residents' quality of life.

METHODOLOGY

Using all the data gathered, as opposed to onsite assessment – data from the inhabitants, sketches, and photographs – it was possible to gather data about the design, the structure and uses of the structures, and the quality of life of the inhabitants. To organize the analysis of various buildings and comprehend their characteristics, the study was categorized into four primary groups: Context overview, Perceptual characteristics, Physical characteristics, and Anomalies.

The Contextual overview focuses on the historical and urban context and general aspects of social housing buildings. It identifies the year of construction, number of floors, number of dwellings, the access system, and distribution. The outcome includes a location plan of the social housing, showing where the buildings are located and the urban context.

The Perceptual characteristics demonstrate the intangible characteristics of the buildings and evaluate the quality of interior spaces. This analysis is conducted empirically and results from on-site observation and registration. In addition to assessing aspects related to the building's envelope, such as thermal comfort, noise, and solar incidence, it also evaluates its relationship with the building's interior, including the organization of interior spaces, the interior-exterior relationship, space uses, and residents' experiences. This group is directly linked to the resident's quality of life and living

conditions. The dwelling plan and building section, illustrate the relationship between the envelope and the interior spaces, as well as the spatial and habitability needs of the residents.
The Physical characteristics pertain to the tangible aspects of the constructions, highlighting the materials and constructive system used in the buildings. This study identifies the composition of the construction elements, such as walls, floors, and roofs, the structural system, glazing, and materiality of the surfaces. Furthermore, this analysis provides insights into how the buildings were built, the problems associated with the construction process, and the absence of materials or layers, including thermal insulation. In this regard, the constructive details allow a better understanding of the building physics.
After analyzing the type of construction and solutions used, it becomes possible to understand the source of existing problems, particularly with the building envelopes. In this context, it is important to identify the anomalies of the facades to understand the main concerns in the structures and, therefore, propose solutions that address these issues and improve living conditions. The identification of anomalies is accomplished through an on-site visual inspection and documented with the aid of photographs. With this information, it is possible to develop drawings of the main facades of social housing buildings, using photomontages and drawings of the building elevations.
With this methodology, it is possible to obtain a complete understanding of the current state of the buildings, as well as their characteristics and needs, both in terms of construction and residents needs.

	FOCUS OF STUDY	**OUTCOMES**
CONTEXTUAL OVERVIEW	Historical and urban context	Location plan
PERCEPTUAL CHARACTERISTICS	Thermal comfort Noise Solar incidence Space uses and residents' experiences Interior organization Interior-Exterior relationship	Dwelling plan and building section Scale 1:100
PHYSICAL CHARACTERISTICS	Constructive system Materials Structure Walls Roof Glazing Finishes	Construction detail Scale 1:20
ANOMALIES	Identification of anomalies Visible problems on main facades	Elevations Photomontage Scale 1:200

Figure 1. Methodology for the characterization of building envelopes.

CASE STUDIES

Using the Mapping Public Housing Database,[2] it was possible to identify the social housing buildings in Portugal, built between 1910 and 1974. Based on this map, it is possible to verify that there is a higher concentration of public housing in the metropolitan areas of Lisbon and Porto. This is due to the higher population density and the high degree of urbanization in these regions. Furthermore, geographically, there is a tendency for a greater number of social housing complexes along the coast, especially in the northern and central coastal areas. This phenomenon is related to the country's population distribution, which is denser in these areas due to the historical and economic advantages associated with proximity to the sea. On the other hand, the interior of the country has fewer social housing buildings, probably due to lower population density and less urbanization in these areas. In these regions, there is less pressure on the housing market and, consequently, less need for public housing construction. In southern Portugal, particularly in the Alentejo and Algarve regions, there is a moderate distribution of social housing buildings. In the Algarve, there is a slight concentration in urban and tourist areas, and in Alentejo, despite the large territorial extension, the lower population density is reflected in fewer public housing offerings. In many rural and less densely populated areas, especially in central and northeastern Portugal, there is little public housing supply. This absence of social housing can be explained by the lower population density and the more dispersed distribution of communities, resulting in a lower concentration of people in need of social housing, contrary to what occurs in urban areas. These observations from the map reflect the socioeconomic distribution and urbanization of Portugal, with public housing policies more focused on areas of higher population density.[3] The concentration of social housing in metropolitan areas and along the coast highlights where the need for affordable housing is most critical, while the lesser presence in the interior and rural areas indicates different demographic and economic dynamics.[4] Moreover, the study focuses on the analysis of eight social housing buildings in Viana do Castelo,[5] Portugal, namely Darque Social Housing (1), 3 de Julho Social Housing (2), S. Vicente Housing Complex (3), Brejo Housing Complex (4), SCM Housing Complex (5), Fishermen’s Block (6), Municipal Urbanization of Lugar do Meio (7), and Municipal Urbanization of Lugar do Malhão (8). However, in this paper, only the 3 de Julho Social Housing analysis will be elaborated in detail.

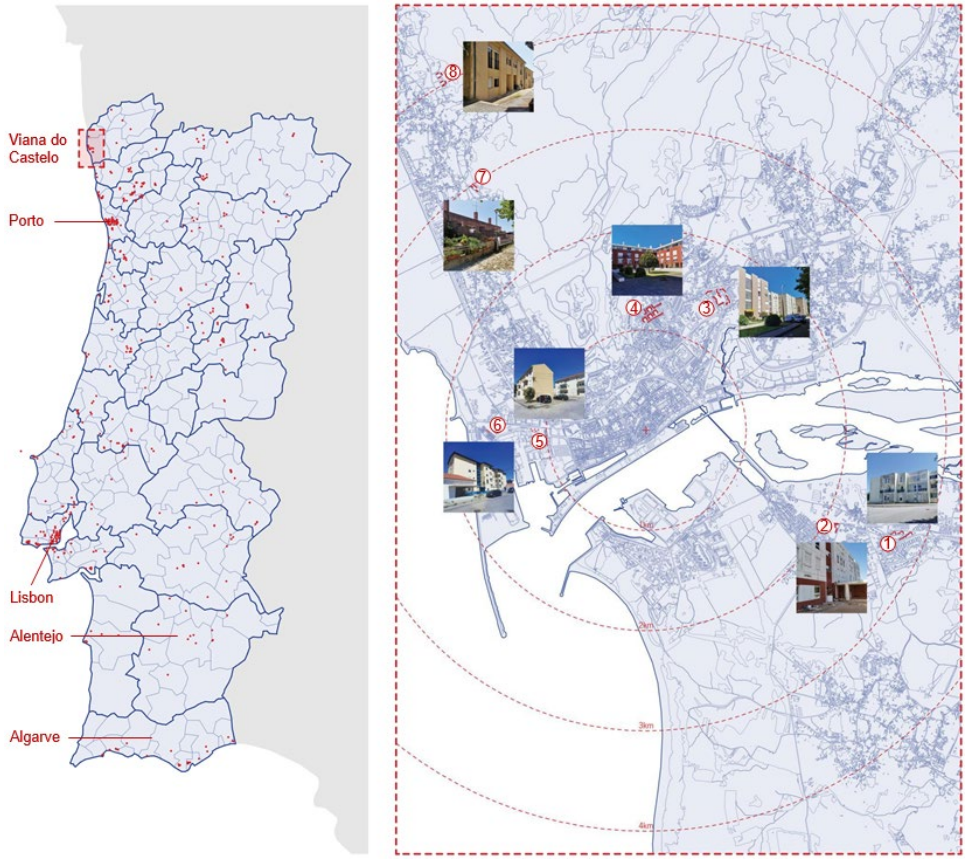


Figure 2. Identification of social housing in Portugal (left) and location of social housing case studies in Viana do Castelo (right).

3 DE JULHO SOCIAL HOUSING

Historical and urban context

Promoted by CMVC,[6] the 3 de Julho Social Housing was constructed in 1998 on the southern bank of Lima River, 2.1km from the city center of Viana do Castelo, and results from the design project for a Housing Complex with controlled costs. This housing complex consists of two housing blocks with a regular floor plan, with four floors each. Attached to block 2, there is a triangular-shaped volume with only one floor, which corresponds to social support equipment APPACDM Viana do Castelo.[7]

Since the construction of the 3 de Julho Social Housing, CMVC has promoted maintenance and renovation actions for the housing complex, however, residents have never allowed such interventions. These reactions result from the residents' mistrust of the people who intervene in the neighborhood, as they feel that their privacy is compromised. This context of distrust may be associated with the decriminalization that these social groups generally suffer.

Figure 3. Location plan and photographs of 3 de Julho Social Housing.

Perceptual characteristics

The complex includes 42 dwellings, with access through three staircases. Despite the four floors, there are no elevators, impacting accessibility. Regardless of the housing typology, each dwelling is composed of a kitchen with a pantry and an annexed laundry treatment area, living room, bedrooms, and bathroom. All the dwellings, both T2 and T3 typologies, have only one bathroom. Throughout the building envelope, there are no exterior spaces allocated to the dwellings. In other words, the residences lack any form of balcony, whether for social areas or bedrooms. Furthermore, the roof is inaccessible, which removes the potential for creating common areas. Despite the buildings being slightly elevated, ground floor dwellings face privacy issues due to their proximity to the public space, with windows providing direct views to the outside. The 3 de Julho Social Housing is located in a low-traffic residential area with no major noise sources. However, the use of single-pane glass (5mm) does not contribute to acoustic comfort and allows for significant energy losses. On the east-facing facade, external solar shading with plastic roller blinds has been applied to control the entry of light into the social areas and bedrooms. However, there is no shading system on the west-facing facade.

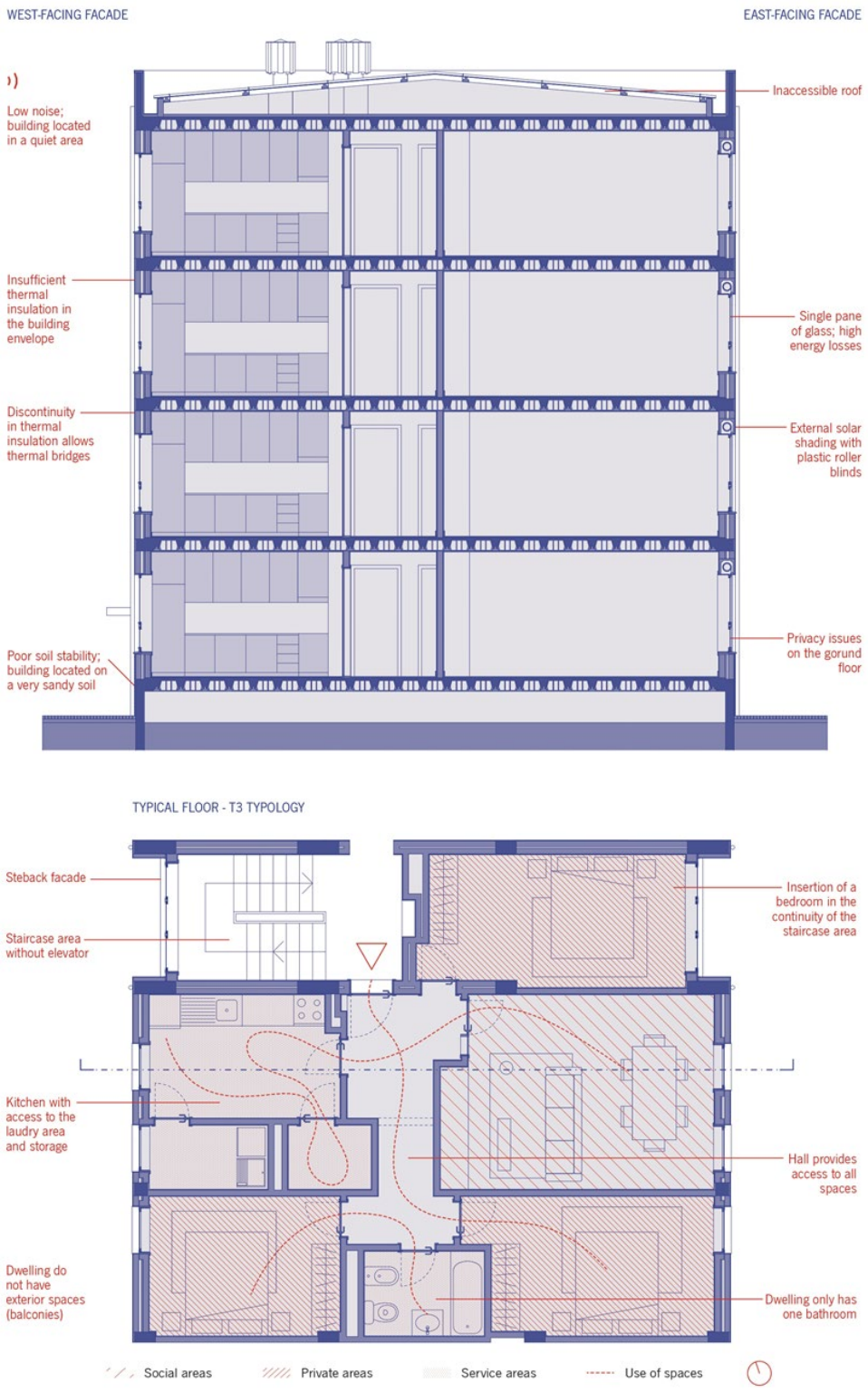


Figure 4. Space uses and internal organization of 3 de Julho Social Housing.

Physical characteristics

According to the Descriptive Document of the Structural Project,[8] the buildings have a reinforced concrete structure, consisting of columns and beams, and lightweight floor slabs. In addition, the exterior walls are made up of double brick masonry (11cm) with an air gap (4cm) and expanded

polystyrene thermal insulation (3cm). On the exterior, these walls are covered with waterproofing plaster, except the basement area which is covered with ceramic strips. The interior walls are made with simple brick masonry (11cm), plastered and painted with plastic paint on both sides, except the kitchens and bathrooms which are covered with ceramic tiles. The roof is composed of fiber cement sheets, applied over concrete beams supported by brick walls, and mineral wool thermal insulation (5cm). Moreover, the exterior frames are made with white thermo-lacquered aluminum profiles and 5mm glass, and protected by plastic roller blinds. In the laundries, it was applied an orientable glass to guarantee permanent ventilation.

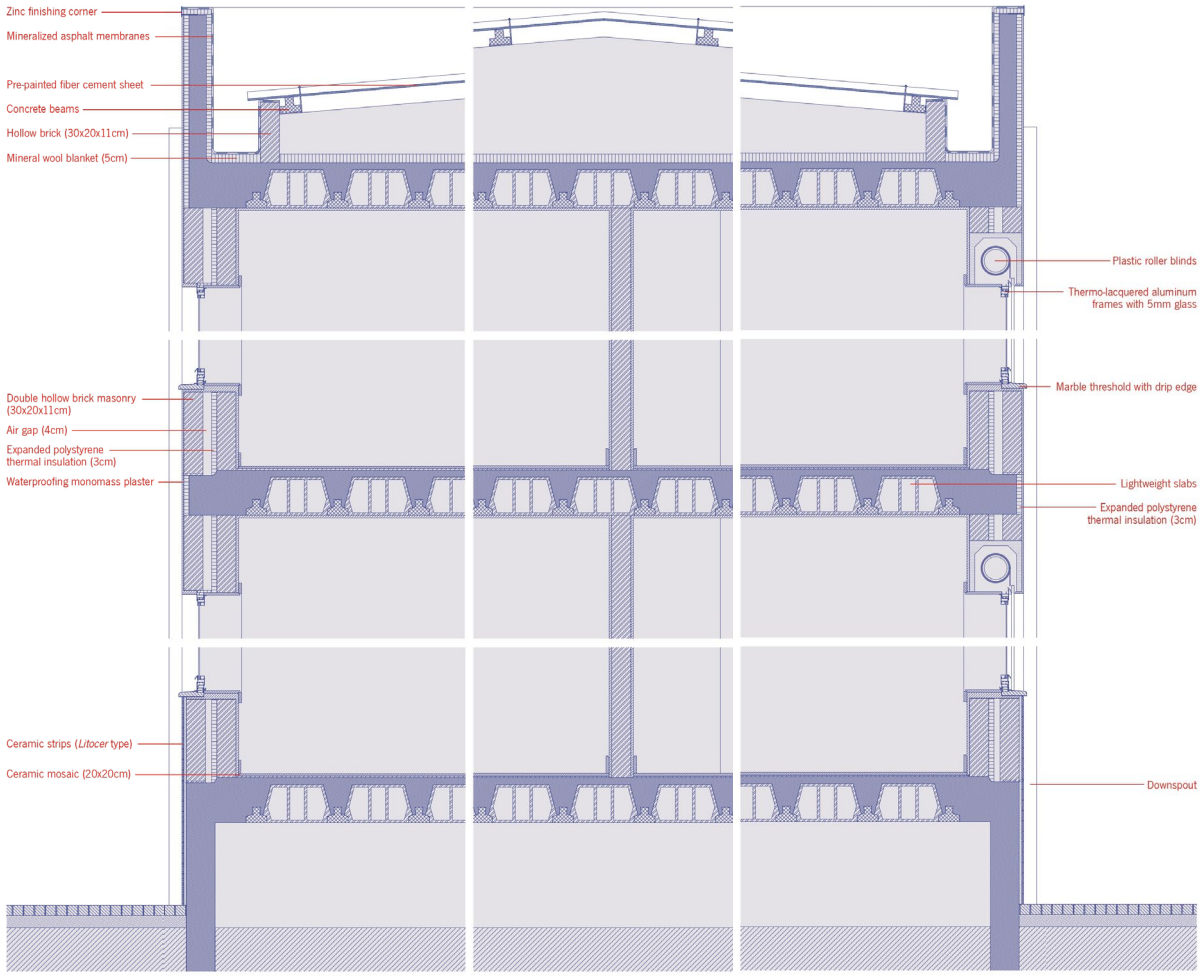


Figure 5. Detail section of the building envelope of 3 de Julho Social Housing.

Anomalies

Since the 3 de Julho Social Housing is located near the Lima River and on sandy soil, there are currently serious problems with the foundations of the buildings and consequently, issues related to their structural stability. The ground floor of the social equipment is sinking due to the poor stability of the soil, resulting in a lowering of about 5cm compared to housing block 2. Even though the housing complex was relatively recently built (1998) with traditional construction techniques that are widely used today, its poor state of conservation is evident. Many of the problems of dirt and lack of maintenance are caused by the lack of hygiene and cleanliness of the building by the residents, according to workers of the social equipment. In addition, mold, moss, and green stains are present

throughout the building, as well as the oxidation of ventilation grilles and exposed iron reinforcement due to the inadequacy of the thickness of the protective layer. It should be noted that throughout the entire building, it is possible to see large areas where the exterior tile cladding has detached from the wall.

Figure 6. Identification of existing anomalies of 3 de Julho Social Housing (block 2).

RESULTS

The construction years of the analyzed social housing range from 1968 to 2004, with the SCM Housing Complex being the oldest and the Municipal Urbanization of Lugar do Malhão the most recent. Most building are around four floors high, with one building in the S. Vicente Housing Complex reaching 11 floors. However, only the latter built block has an elevator. The number of dwellings varies from 16 in the Fishermen's Block to 290 dwellings in the Brejo Housing Complex. Building access is typically centralized with distribution to two dwellings, left and right.

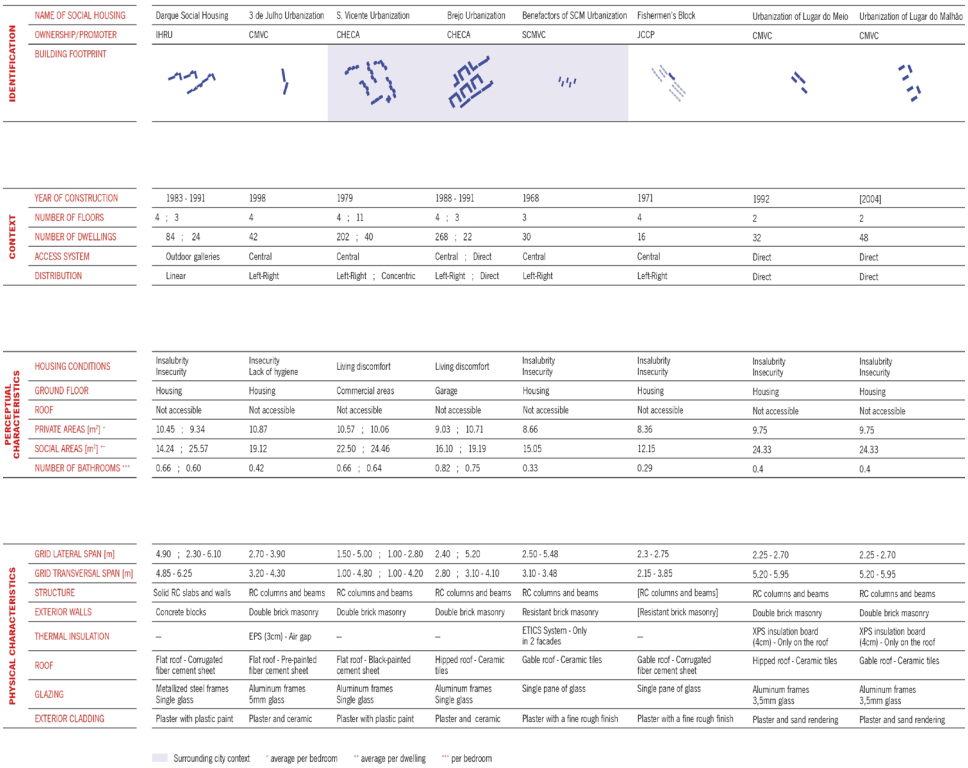
The perceptual characteristics analysis shows that many buildings are in a state of insalubrity, insecurity, and living discomfort. Among the buildings analyzed, those located outside urban centers have residential use on their ground floors, while buildings located in urban contexts have ground floors that vary between residential, garage, and commercial areas. Most buildings lack balconies lack

balconies, however, in those that do, residents often convert them into enclosed spaces to increase interior area. Roofs are generally inaccessible, not taking advantage of their potential for creating common outdoor spaces for residents. The buildings have low-performing windows with single glazing, leading to poor thermal and acoustic efficiency. This results in noise exposure and overheating issues due to a lack of shading on south-facing facades. Spatially, there are evident issues of insufficient space and rigid compartmentalization across all social housing blocks. Bedrooms are relatively small, with the SCM Housing Complex and Fishermen's Block not meeting the minimum values established in regulations, with values of 8.66m² and 8.36m², respectively. Additionally, these areas do not allow for the placement of work zones, whether for studying or teleworking. Social areas, often shared as dining and living rooms, are frequently insufficient and poorly defined due to their small size, seen notably in older complexes like SCM and Fishermen's Block. Generally, in terms of interior organization, social areas face south or east, and private areas face north or west, varying according to the building's location and the context in which they are situated. Furthermore, service areas, such as bathrooms, kitchens and storage, are located at the center of the homes, separating private areas from social areas. Additionally, privacy issues are common in buildings with ground-floor housing due to their proximity to the street.

The analysis of physical characteristics revealed that reinforced concrete columns and beams are commonly used. The SCM Housing Complex and the Fishermen's Block, built in 1968 and 1971, respectively, use resistant brick masonry, while relatively newer housing complexes mostly have double brick masonry walls. Additionally, in all the analyzed buildings, thermal insulation is either insufficient or nonexistent, contributing to thermal discomfort and the formation of thermal bridges, resulting in surface condensation and the proliferation of fungi and mold. In this context, the older buildings exhibit significantly inferior construction quality, living conditions, and comfort levels. However, in the relatively newer buildings, although some have thermal insulation, it is clearly insufficient to meet current comfort demands. The roof varies in form and slope, but the materials and construction principles are common across several social housing buildings, with fiber cement sheets and ceramic tiles supported by a wooden substructure being prominent. In terms of glazing, the windows are mainly aluminum-framed and single-glazing, with thicknesses ranging from 3.5mm to 5mm. Regarding interior finishes, it is common to use parquet, cork, and ceramic mosaic for flooring, and plaster with plastic or vitrifying paint and ceramic tiles for walls and ceilings. For exterior walls, in all housing complexes, the facades are covered with plaster, with the 3 de Julho Social Housing and Brejo Housing Complex also covered with ceramic cladding on the facades.

A common issue across all social housing is the strong presence of humidity, typically located at the transitions between the roof and facades, in exterior walls in contact with the ground, and in the openings areas. The lack of adequate insulation and the detachment of coatings contribute to water penetration, promoting the appearance of biological colonies, mold, and moss. Additionally, cracks caused by structural movements, discontinuity of materials used on the façade, and the inadequate quality of materials used in construction facilitate water infiltration into the building elements. These conditions negatively affect the integrity of the buildings and the health of the residents. Moreover, due to the insufficient thickness of the protective layer in reinforced concrete, the steel reinforcements become exposed to moisture and corrosive agents, potentially compromising the structural safety of the buildings. Metallic elements, such as ventilation grilles, balconies, and support structures, show signs of oxidation due to exposure to the marine environment and lack of adequate protection against corrosion. The oxidation compromises the safety and durability of these elements, requiring repair or replacement interventions. All the anomalies identified in the buildings are exacerbated both by proximity to the sea and by lack of maintenance, causing the deterioration of the constructions.

This analysis of social housing, in addition to highlighting the high energy consumption, housing discomfort, and structural vulnerability of these buildings, also demonstrated that the existing housing model is based on a static and rigid compartmentalization, not accommodating new spatial and programmatic needs. Furthermore, it was found that the older the construction year of the social housing, the lower the construction requirements and legislative restrictions, resulting in greater problems both in terms of spatial and interior organization, as well as in construction and comfort.



		Darque Social Housing	3 de Julho Urbanization	S. Vicente Urbanization	Brejo Urbanization	Benefactors of SCM Urbanization	Fishermen's Block	Urbanization of Lugar do Meio	Urbanization of Lugar do Malhão
IDENTIFICATION	NAME OF SOCIAL HOUSING								
	OWNERSHIP/PROMOTER	IHRU	CMVC	CHECA	CHECA	SCMVC	JCCP	CMVC	CMVC
	BUILDING FOOTPRINT								
CONTEXT	YEAR OF CONSTRUCTION	1983 - 1991	1998	1979	1988 - 1991	1968	1971	1992	[2004]
	NUMBER OF FLOORS	4 ; 3	4	4 ; 11	4 ; 3	3	4	2	2
	NUMBER OF DWELLINGS	84 ; 24	42	202 ; 40	268 ; 22	30	16	32	48
	ACCESS SYSTEM	Outdoor galleries	Central	Central	Central ; Direct	Central	Central	Direct	Direct
	DISTRIBUTION	Linear	Left-Right	Left-Right ; Concentric	Left-Right ; Direct	Left-Right	Left-Right	Direct	Direct
PERCEPTUAL CHARACTERISTICS	HOUSING CONDITIONS	Insalubrity Insecurity	Insecurity Lack of hygiene	Living discomfort	Living discomfort	Insalubrity Insecurity	Insalubrity Insecurity	Insalubrity Insecurity	Insalubrity Insecurity
	GROUND FLOOR	Housing	Housing	Commercial areas	Garage	Housing	Housing	Housing	Housing
	ROOF	Not accessible	Not accessible	Not accessible	Not accessible	Not accessible	Not accessible	Not accessible	Not accessible
	PRIVATE AREAS [m²] *	10.45 ; 9.34	10.87	10.57 ; 10.06	9.03 ; 10.71	8.66	8.36	9.75	9.75
	SOCIAL AREAS [m²] **	14.24 ; 25.57	19.12	22.50 ; 24.46	16.10 ; 19.19	15.05	12.15	24.33	24.33
	NUMBER OF BATHROOMS ***	0.66 ; 0.60	0.42	0.66 ; 0.64	0.82 ; 0.75	0.33	0.29	0.4	0.4
PHYSICAL CHARACTERISTICS	GRID LATERAL SPAN [m]	4.90 ; 2.30 - 6.10	2.70 - 3.90	1.50 - 5.00 ; 1.00 - 2.80	2.40 ; 5.20	2.50 - 5.48	2.3 - 2.75	2.25 - 2.70	2.25 - 2.70
	GRID TRANSVERSAL SPAN [m]	4.85 - 6.25	3.20 - 4.30	1.00 - 4.80 ; 1.00 - 4.20	2.80 ; 3.10 - 4.10	3.10 - 3.48	2.15 - 3.85	5.20 - 5.95	5.20 - 5.95
	STRUCTURE	Solid RC slabs and walls	RC columns and beams	RC columns and beams	RC columns and beams	RC columns and beams	[RC columns and beams]	RC columns and beams	RC columns and beams
	EXTERIOR WALLS	Concrete blocks	Double brick masonry	Double brick masonry	Double brick masonry	Resistant brick masonry	[Resistant brick masonry]	Double brick masonry	Double brick masonry
	THERMAL INSULATION	–	EPS (3cm) - Air gap	–	–	ETICS System - Only in 2 facades	–	XPS insulation board (4cm) - Only on the roof	XPS insulation board (4cm) - Only on the roof
	ROOF	Flat roof - Corrugated fiber cement sheet	Flat roof - Pre-painted fiber cement sheet	Flat roof - Black-painted cement sheet	Hipped roof - Ceramic tiles	Gable roof - Ceramic tiles	Gable roof - Corrugated fiber cement sheet	Hipped roof - Ceramic tiles	Gable roof - Ceramic tiles
	GLAZING	Metallized steel frames Single glass	Aluminum frames 5mm glass	Aluminum frames Single glass	Aluminum frames Single glass	Single pane of glass	Single pane of glass	Aluminum frames 3,5mm glass	Aluminum frames 3,5mm glass
	EXTERIOR CLADDING	Plaster with plastic paint	Plaster and ceramic	Plaster with plastic paint	Plaster and ceramic	Plaster with a fine rough finish	Plaster with a fine rough finish	Plaster and sand rendering	Plaster and sand rendering

Surrounding city context * average per bedroom ** average per dwelling *** per bedroom

Figure 7. Overview of Viana do Castelo Social Housing.

CONCLUSION

The results obtained from the analysis of social housing in Viana do Castelo offer a representative view of the current state of the housing stock in Portugal. As a large part of the Portuguese housing stock was built in similar periods, with equivalent methods and materials, it is possible to conclude that the characteristics and problems found in Viana do Castelo are largely representative of other regions of the country. The methodology applied made it possible to identify common characteristics and recurring problems in buildings, such as lack of maintenance, living discomfort, and inadequacy of spaces to the current needs of residents. Furthermore, this methodology proved to be effective in understanding the current state of buildings and identifying the main areas that require intervention. This approach can be replicated in other regions to assess the local housing stock and develop solutions adapted to the specific needs of each area. The systematization of analyses, with the creation of plans, sections, construction details, and elevations, provides a solid basis for the development of renovation projects aimed at improving habitability conditions, energy efficiency, and durability of buildings. In conclusion, the analysis of social housing in Viana do Castelo not only confirms the urgent need for interventions in the aged housing stock in Portugal but also offers a methodological model that other regions can adopt. The application of this methodology for the renovation of

buildings has the potential to significantly transform the Portuguese housing outlook, promoting safer and more comfortable constructions suited to the needs of its inhabitants. However, the study also highlights that interventions in such buildings should be tailored to the specificities of each case. Typically, standardized solutions like ETICS[9] are applied uniformly, creating continuous surfaces that often conceal rather than resolve underlying issues.[10] While restoration efforts are predominantly focused on addressing structural deficiencies and improving thermal efficiency through insulation and double glazing, they frequently fail to address problems related to a lack of interior space, flexibility in spatial configuration, or adaptability to changing uses. Therefore, a more holistic approach that considers these aspects is crucial for enhancing the overall quality and functionality of social housing.

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REGENERATING HABITATS. A NEW HOUSING BASED ON MODULAR WOODEN SYSTEMS

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INTRODUCTION

Today, and especially in the construction sector, we are constantly faced with the need to find a rapid response to the various demographic, economic or environmental challenges on a global scale. From a social point of view, with daily migrations of different scales and contexts, from an economic point of view, with the unpredictable variations in market values, or by the undeniable climate emergency.[1]

The need for flexibility and adaptability in housing has become fundamental, and is an essential feature of architecture, considering the emergence of a new domesticity based on the automation of the individuality of the inhabitants and the discontinuous construction of the habitat.[2]

Designing reversibility construction systems and materials, not only allows the concept of "looping", with environmental advantages, but also unleashes multiple social benefits such as adapting the space over time according to the different users who may inhabit it. [3] In this sense, it is essential to develop the construction systems based on modularity and prefabrication, especially in natural materials like wood, capable of respond not only to the environmental and construction challenges of the industry, but also to the needs of current housing models, allowing for greater flexibility and adaptability of the habitat.

Unconformity

Human beings natural resistance to the built environment and their own habitat is a complex issue that reflects a constant conflict between the need for stability and the search for evolution. Since the inception of civilization, individuals have consistently displayed an inherent inclination to alter their surroundings, motivated by the imperative to enhance their living conditions and tailor the environment to their requirements.[4]

A close example of this is the simple act of organizing space with furniture, something that many people practice intuitively and even compulsively. This is perhaps the most effective way of making visible a criticism about the space we live in. Changing the layout of the furniture is the most accessible and quickest way we have transform the home we live in. Changing the disposition of furniture also changes the way we use our home.[5]

Figure 1. Ricerca della comodità in una poltrona scomoda (DOMUS). Bruno Munari. 1944

The truth is that human beings have always had this desire to change, this need for constant modification of their built environment in the search for better comfort and living conditions.
Defining the beginning of a flexible architecture—an architecture that responds to this variability—proves to be a very difficult task. If we just think about the dwellings of nomadic peoples (e.g., Mongolian yurts), who, in addition to the materiality and spatial layout adapted to the climate and lifestyle of the community, were made up of a structure designed to be assembled and disassembled quickly, allowing the inhabitants to move easily between different locations in search of their subsistence.[6]
In this sense, trying to explain the history of flexible housing is, at the same time, trying to explain the history of housing itself.[7]

History

Therefore, the scope of our analysis is limited to the 20th and 21st centuries. During this period, there is a greater focus on housing issues due to the different circumstances that took place throughout the century (like the World Wars as an example), but also because during this period, the first intentions for architects to design intentionally adaptable buildings began.
We can summarize the evolution of this issue over the past century into four episodes.[8]
1. Between 1920-30, coinciding with the beginning of Modernism and the debate on housing, the first ideologies and experiments in flexibility appear with some of the leading modernist architects such as Le Corbusier, Gerrit Rietveld and Neutra.[9]
2. In the middle of the century, with advances in industrialization, a link between flexibility and prefabricated buildings emerged with the development of a number of industrially systematized solutions and components. Walter Gropius and Konrad Wachsmann are some of the main characters.[10]
3. Between 1960-90, the development of collective housing and social participation led to a renewed interest in flexible housing as a way of giving users choices. It is during this period that emerged some concepts that influence the design of space to this day, such as the Open Building concept. [11]

4. At the end of the century, with the start of the first ideas of sustainability and the circular economy, an idea of constructive flexibility appeared. An example of this is the decomposition of a building to facilitate its maintenance or transformation, the concept of Shearing Layers diffused by Stewart Brand. [12]
5. The evolutionary logic observed throughout the past is reflected in two aspects of the 21st century:
5A. The evolution of technology providing the development of production and manufacturing systems and methods that favor the flexibility of buildings. Principles such as DfD (design for disassembly), DfA (design for adaptability), material passport, standardization and modularity are some of the topics identified as the main drivers of flexibility in construction today. [13]
5B. The emergence of new housing models and typologies, such as co-housing, which have arisen in response to urban, economic and social challenges.
As can be observed, the two distinct approaches, namely the spatial dimension and the construction logics, have both contributed to the development of novel modes of living, although this division is not strictly literal. The development of adaptable solutions that allow for new spatial models is always linked to the development and design of technical solutions.

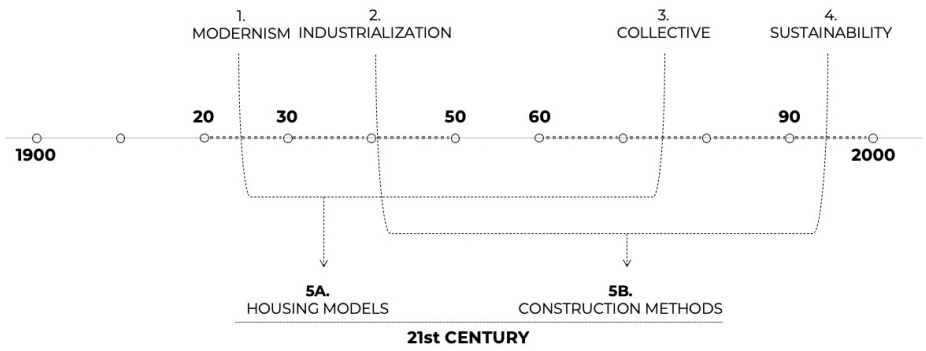

Figure 2. Last century in five episodes. Rui Ferreira. 2024

REGENERATE

As architecture and the adaptability of spaces have adapted to the changes and requirements of society over the past few decades, our goal is to comprehend today's society and determine which logics can best accommodate their requirements, particularly given that this society seems to be surrounded by uncertainty, living at an increasingly rapid pace, and lacking space nor time.
From a social point of view, with the constant growth of the population, daily migrations of different scales and contexts, different cultural demands or personal preferences, or from an economic point of view, with the unpredictable variations of market values or even the undeniable climate emergency.[14]
The quest for global sustainability and technological demands requires a change in our building design culture, in order to adopt a new vision in which buildings typologies are flexible to deal with different variables throughout their useful life.[15]
In this evolutionary logic, it's important to understand our surrounding and purpose new scenarios for the episode 6, the future, that could be an alternative to current housing models. In this sense, combining the new needs and models of living (6A), with the latest constructive developments (6B), seems to be the logical solution.

6A. Habitat

If housing, in a specific context, has historically and culturally been associated with a certain model of cohabitation or a package of housing functions, 21st century housing is characterized by uncertainty in relation to functional needs, cohabitation groups or domestic cohabitation relationships.

This is reflected by the demographic changes that have taken place over the last twenty years, including: a decrease in the number of families considered traditional; an increase in the number of single-person households; a higher proportion of elderly people; a greater demand for shared accommodation or a growing tendency to work from home.[16] This last point with a significant increase in the context of the pandemic crisis that affected the globe in 2020.

6B. System

The construction industry is responsible for a significant amount of resource consumption globally, accounting for more than 50% of global energy use and more than 35% of CO2 emissions.[17] The most popular construction materials, like steel or concrete, are major polluters that contribute greatly to the carbon footprint of the construction industry. [18]

In this sense, there is a great demand for the introduction of other versatile construction materials that can match the resistance and strength of this ones. The use of wood (under responsible forestry conditions), being a natural carbon sink, could allow the construction sector to avoid the substantial greenhouse gas emissions associated with the unsustainable use of materials. In addition, wooden elements could continue to store CO2 for the lifetime of the building. [19]

However, a change in the raw material is not enough, given that much of the pollution caused by the construction sector is related to the tons of CDW (Construction and Demolition Waste) generated by premature and arbitrary demolition practices.[20] This predominant end-of-life option for buildings and their components is the result of the linear production model used by most construction companies.

Considering this, should be prioritized the use of alternative forms of production, which can be redesigned, upgraded, or disassembled reducing waste generation.

Prefabrication and modularity were important in the history of architecture for understanding, implementing and improving these methods, simplifying the process of disassembling at the end of the first building's life cycle. [21]

Regenerating the habitat (A+B)

The combination of these two issues once again proves to be complementary, as it has been throughout the century. On the one hand, adapting the living conditions of spaces to today's society will allow us to extend the useful life of a building, delaying what could be its early demolition, demolition which, as we noted earlier, is responsible for a large part of the waste from the construction sector. On the other hand, by taking advantage of the technical malleability that prefabricated and modular solutions, especially using wood, allow, it will be possible to create different spatial solutions from conventional models.

In other words, the aim is to explore the introduction of flexible spatial logics into the principles of modular construction, which are often associated with more rigid and compartmentalized programs, and, reciprocally, explore the implementation of the constructive logics of (de)assembly and dismantle of modular construction components into conventional linear models, often used in residential construction.

METHOD

Our scope of analysis will focus on the portuguese context. Despite not being a country with a wood-based construction culture, it had an important tradition in Portugal until the mid-20th century (Figure 3), used fundamentally based on mixed construction processes on interior walls, roofs and floors. However, with some exceptions, was rarely used as a conventional integral solution in the housing context.

Today, despite being a sector characterized by the development of small and medium-sized companies, recent developments show signs of growth, with a considerable increase in supply and marketing expected in the coming years, which reveals the relevance and need for research in the same direction. [22]

Figure 3. Traditional use of wood in Portugal. Rui Ferreira. 2024

Portugal's wood industry

In order to complement the existent information about the wood production and marketing industry in Portugal, one of the first goals of the research was to develop a study addressed to companies with the aim of analyze and identify how the industrialization of modular wood systems could be an alternative to the actual challenges and needs of housing in Portugal.

Some of the questions we intend to answer are: The main systems and types of wood used on their systems, the origin of these wood, current applications (program), scale of operation, main barriers, among others.

Figure 4. Online form, available on https://forms.gle/1etg4hUdmTUaGRhS6

Although the form is still open, comparing with other studies[23] it is possible to draw some conclusions, and even more, anticipate the main barriers that hinder the development of this kind of solution in the country.
The lack of knowledge and experience in modular construction by the majority of the companies in the sector is one of the reasons for the lack of knowledge and experience. Public training courses and the integration of research institutions in the development of proposals are suggested. Another factor frequently mentioned is the necessity of government involvement and encouragement in the utilization of alternative building materials and systems in public projects.

Housing

Simultaneously, it is imperative to scrutinize the manner in which the housing structures that are currently being constructed in Portugal incorporate flexibility. Given this, and to fill the gap with the last point mentioned by the companies, we consider it pertinent to analyze how urban planning and state-supported housing have dealt with these issues.
Firstly, for their social relevance, given that this type of housing usually responds to a variety of different resident profiles, and their changes over time, its analysis will allow us to understand if the principles of flexibility will be able to respond to the demographic changes and emerging needs of the population. Also, because social housing had a solid foundation in Portugal, from the workers quarters at the beginning of the 20th century to urban rehabilitation projects of today. Over the last century, there has always been room for experimentation, proving a testing ground for new architectural and urban planning practices.
Another relevant point it is the necessity to ensure that flexible housing solutions are being implemented in an equitable manner, ensuring that everyone, whatever their socio-economic condition, will have access to housing that is adaptable to their needs.

Case study

In the last decades, the main public entities responsible for the housing sector in Portugal, such as IHRU[24] and SRU,[25] as well as a number of municipalities, have promoted several design competitions with the aim of responding to the housing problem.
Therefore, the primary objective is to analyze the previous years' competitions promoted by the above entities, the standard typology promoted, and to identify a transversal pattern among the selected proposals (around forty winning proposals). Considering that these are competitions with a construction commitment, this means analyze which one will actually be built.

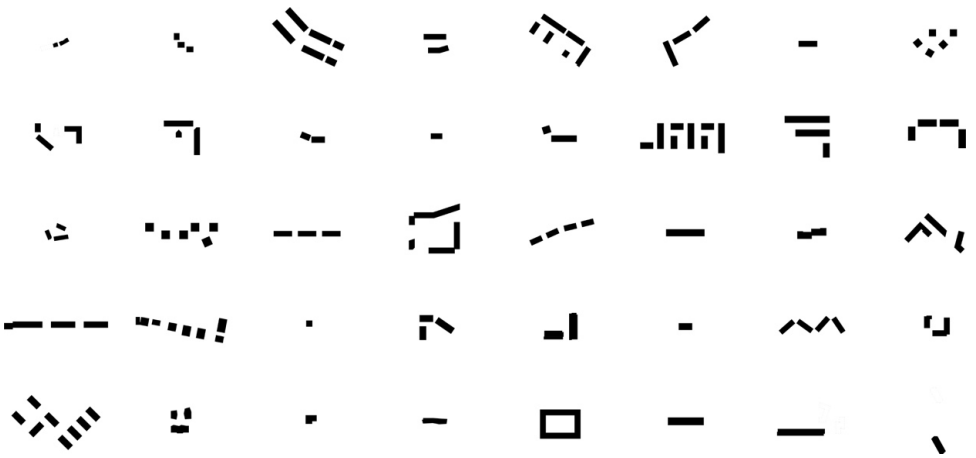

Figure 5. Formal scheme of the proposals. Rui Ferreira. 2024

In order to identify a pattern on types of action and, consequently, the recurrent difficulties, special emphasis is given to typological, spatial, and constructive elements of each proposal, conditioned by the possibility of access to information.
The spatial analysis is based on diagrams that allow us to understand not only the distribution of spaces but also their interrelationnships (Figure 6). In this specific case, and indeed in most cases, we can see that there is a clear division between night and day spaces, with the connecting link being the entrance hall or the circulation.

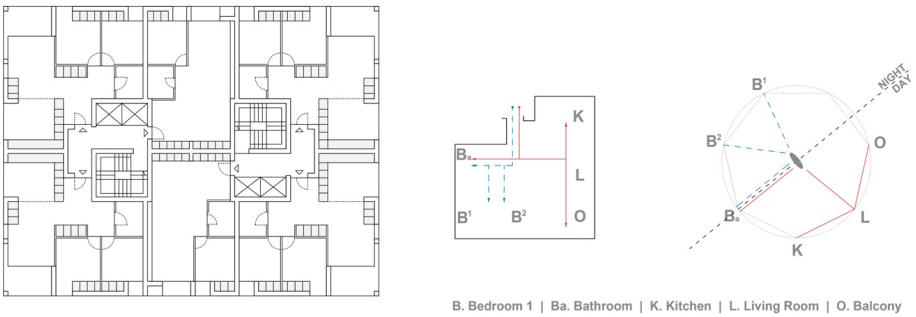

Figure 6. Case study example – Parque dos Picoutos, Matosinhos, Portugal. Rui Ferreira. 2024

Observing the jury report, it is possible identify that this kind of spatial layout is almost always a requirement in the preliminary program.
In addition, a comparative analysis is also made (Figure 7), both spatial and constructive, of the flexibility of the proposals according to a set of defined criteria, based on other leading authors on the subject. [26]

	Surrounding (S)			Unit (U)			Room (R)			Element (E)			Structure (S)			Connections (C)			MEP (M)			Components (Co)		
Competition	S1	S2	S3	U1	U2	U3	R1	R2	R3	E1	E2	E3	S1	S2	S3	C1	C2	C3	M1	M2	M3	Co1	Co2	Co3
01.IHRU_Alcanïça							•				•													
02.IHRU_Quinta do Olho de Vidro																								
03.IHRU_Alfazina																								
04.IHRU_São Francisco Borja										•		•	•						•					
05.IHRU_Varandas do Sado										•		•	•											
06.IHRU_Três Vales													•										•	
07.IHRU_Casquilho Poente											•		•											
08.IHRU_Casquilho Nascente													•										•	
09.IHRU_Quinta da Boa Esperança											•		•										•	
10.IHRU_Rua do Monte										•			•										•	
11.IHRU_Rua das Quintas													•										•	
12.IHRU_Filipa D'Água																								
13.IHRU_Avenida Júlio Santos										•			•										•	
14.IHRU_Avenida Belo Horizonte																								
15.IHRU_Avenida Joaquim Campos													•						•			•	•	
16.IHRU_Antiga Luzoestela											•													
17.IHRU_Hans Isler							•																	
18.IHRU_Quinta das Conchinhas					•			•		•	•													
19.IHRU_Encosta Sul													•										•	
20.IHRU_Quinta da Baldaya													•										•	
21.IHRU_Freamunde											•		•										•	
22.IHRU_Rua do Beato																								
23.IHRU_São Miguel											•													
24.IHRU_Rua de São Ciro				•			•			•	•		•		•								•	
25.IHRU_Avenida Torrado da Silva											•		•										•	
26.IHRU_Parque de Picoutos					•		•			•	•		•										•	
+1.IHRU_Castêlo da Maia					•					•	•		•						•				•	
01.SRU_Rua da Venezuela																								
02.ACM(YMCA_Lote C4 Bela Vista											•													
03.SRU_Conde Nova Goa					•		•					•	•						•				•	
04.SRU_Rua António do Couto					•						•								•					
05.MU.OEIRAS_Leceia					•				•				•						•				•	
06.SRU_Carlos Pinhão											•													
07.MU.LOURES_Eixo Norte/Sul Loures																								
08.MU.ALMADA_Almada (Lote C)							•				•													
08.MU.ALMADA_Almada (Lote D)							•				•		•										•	
09.SRU_Rua da Verónica		•																						
10.MU.CASCAIS_Carcavelos			•				•			•														
11.EPAL_Lisboa																						•		
12.MU.PORTO_Lordelo do Ouro (Lotes A,B e C)																								
12.MU.PORTO_Lordelo do Ouro (Lotes D e E)							•			•	•													

Figure 7. Table of kinds of flexibility of the proposals. Rui Ferreira. 2024

CONCLUSIONS

Analysis of the data revealed a number of important conclusions for future research, such as:
- In most cases, remains a model based on conventional spatial matrices based on rigid compartmentalization, built on an ideology taken over from the traditional family of the 20th century.

- There is still a division between daytime and nighttime activities, creating spaces that are intentionally disconnected from each other, with the main connecting element being an uncharacteristic space, in most cases a corridor, with no possibility of any kind of occupation.
- In terms of spatial flexibility, only around 1/4 of the proposals have some kind of flexibility, most of which are sliding or folding panels that separate the kitchen from the living room.
- In terms of construction, it can be seen that remain the use of linear solutions based on the extraction of resources, like concrete or brick masonry.
- There are no solutions using wood or other natural materials on structural elements (only on the floors) which demonstrates the need to explore the subject, especially in this sector.

Despite this, there are some signs of a paradigm shift, with the recurrent introduction of prefabricated façade systems or the appearance of modular bathroom solutions in some cases, which shows a willingness on the part of competitors to bet on solutions that allow for greater savings in resources and faster implementation on site.

Other contexts

It is also important to consider the incentives, measures, and legislation put in place by the various promoters and authorities in other contexts. If we examine nations such as Finland, Switzerland, and France, it is evident that they have encouraged and even mandated the utilization of natural materials such as wood.

In this last example, since 2022, all public buildings financed by the French state must be built with at least 50% wood or another natural material.[27]

It is essential to understand the reasons why these measures have gone backward in Portugal.

We often associate the difficulty of implementing new measures and new systems with the change that this implies in conventional models, where an entire sector is already oriented in a certain direction.

However, as we can see on Figure 8, it represents a social housing complex, built in Portugal around 100 years ago, with wood as the main construction system, called "demountable houses", of course, in a completely different context, with another type of framework.

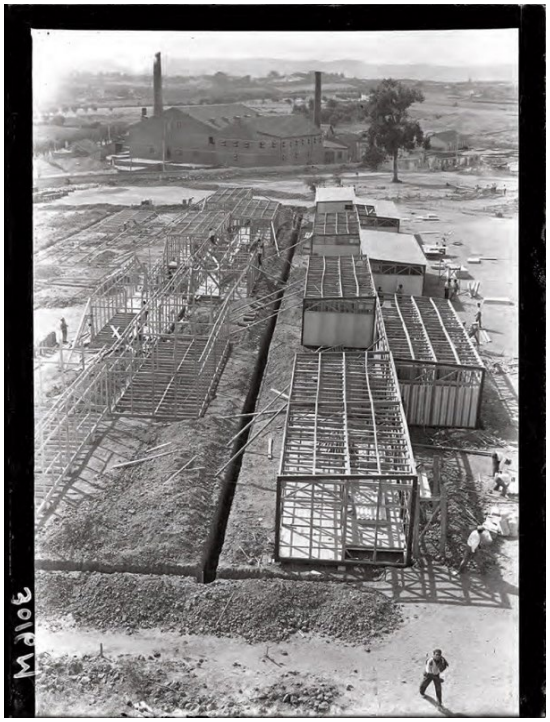

Figure 8. Demountable Houses. Lisboa, 17 de agosto de 1938 (CML,1938.1939).Arquivo Nacional da Torre do Tombo / Empresa Pública do Jornal O Século

Future

Just like Walter Gropius, Konrad Wachsmann and many other figures throughout history have tried solutions that, for many reasons, have not been as successful as they hoped, maybe now is the time to try a new approach. With technological advances and the increasing need and demand for sustainable and adaptable housing solutions, modular timber construction has emerged as a promising opportunity. Through this research, we aim not only to explore the potential of this technique, but also to inspire a transformation in the way we design and live in our spaces, creating a flexible, sustainable and innovative architecture.

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SPONTANEOUS SEOUL. COEXISTENCE OF MODERNITY, TRADITION, AND HYPERDENSITY

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INTRODUCTION

As the world's urban population constantly increases, compact urban form is crucial for developing hyper-dense cities. Modern East Asian megacities adopted radical modernist planning principles during large-scale expansion. Seoul, South Korea, mainly developed during the 1970s and 1980s, implementing megaprojects that use the urban megablock as the primary organisation system. This research critically investigates megablocks as an efficient multiscalar urban model that defines a network of streets or a grid, providing a framework for nesting inside superblocks that again nest inside regular blocks. The main research question to be addressed is whether the megablock is still a positive model or is to be relegated to the ideologies of the past century.

The megablock has the potential to incorporate multiple functions in a compact system, creating a positive experience for the inhabitants. The block's introverted nature fosters an intimate atmosphere, enhancing the quality of the space and promoting pedestrian circulation and social interaction. Seoul has been selected as a dynamic case study that simultaneously embodies Eastern and Western concepts. Its development has embraced modern architecture and urban design principles, resulting in a unique blend of orthodox modernism and a local milieu of hybrid functions.

The research uses a single case study as the primary analysis method, investigating the Sanggye project in Seoul, implemented between 1986 and 1988. The researched site is a megaproject on the northeast side of Seoul that was formed as a linear city. It comprises megablocks subdivided by major roads, conceived as a unique urban and architectural development sponsored by the government. The research is conducted using qualitative data gained through fieldwork to analyse the experience of the space. The fieldwork is based on the participant walkthrough using techniques such as pictures, video, sketches, and written and verbal notes.

Urban megablocks have the potential to create a positive environment in a high-density city. Changes in living/working patterns could be reflected in the megablocks, as they are the right size to accommodate a diversified functional program, creating an urban village atmosphere in the dense megacity. Thus, bigness is not necessarily a problem of modern cities if the size is fragmented with multiscalar systems.

SEOUL'S URBAN TRANSFORMATION

From the formation of the Republic of Korea in 1948 to the military coup of 1961, South Korea continued to manage urban developments using methods that were inherited from the Japanese occupation period (1910-45). Land Readjustment (LR) is the primary tool for reorganising existing urban areas and developing new land.[1] It was introduced in Korea with the first Urban Planning Act enacted in 1934 during the Japanese colonial regime. It remained effective until 1962 when the Republic of Korea's first City Planning Law was implemented. However, many methods adopted during the Japanese period persisted, such as the radiating and grid planning structures, building regulations, and land readjustment principles.[2]

The 1960s were a period of rapid urbanisation and economic upheaval. The urban population grew at the fastest pace. Thus, the government needed to develop new and practical actions for urban development. In 1966, the Seoul Metropolitan Government (SMG) published the General Master Plan of Seoul, which intended to expand the city concentrically along four circular and fourteen radiating lines.[3] Seoul's first major expansion was in the Gangnam area on the south side of the Han River. After the development of Yeongdong Districts 1 and 2 in Gangnam in 1974, the Jamsil district was planned, located on the east side of Gangnam, now Songpa-gu. This plan has allowed Korean planners to test urban principles in a vast area. This experience later produced large-scale urban projects like the Mokdong and the Sanggye projects. Both adopted a linear development using a central axis comprised of commercial buildings.

Sanggye Project

Examples of linear city ideas are numerous. The earlier concepts of a linear city are from Arturo Soria y Mata in 1882 for Madrid, Spain; Ivan Leonidov's competition proposal for the Magnitogorsk, Russia, 1930, later developed by Ernst May; The Peter Eisenman and Michael Graves's Linear City, New Jersey, USA, 1965; And the theoretical project of the Continuous Monument, drawn up by Italian collective Superstudio in 1969. This is to mention a few possible precedents the urban planners could have studied to define the Sanggye project. Undoubtedly, a critical precedent used for the project's development was Clarence Perry's Neighbourhood Unit, as the language used to classify the urban blocks strongly depends on his theory. Thus, the linear city idea, together with the megablock, creates the two main concepts of the urban design of the Sanggye project.

A fundamental document to understand the Sanggye Project is the "Comprehensive Report on the Basic Design of Sanggye District Development Site".[4] The analysed document contains important details essential to grasp the project's strategy, which was developed by what is now the Korea Land and Housing Corporation (LH). LH is a public organisation that has implemented megaprojects in Seoul called New Towns, as they provided a large number of homes with mass housing complexes, commercial activities and infrastructural works.

The document reports an extensive analysis of the project. The introduction also references key precedents related to the megablock and describes an ideal city that can provide a high-standard place for all. On page 29 of the document, four essential diagrams explain the intervention's strategy. The first diagram (Fig. 1) shows the first megablock system, called the "Community Unit". However, in this paper, I have classified three levels of blocks: the regular block nested into the superblock, which is also nested into the megablock. In the project, there are five megablocks, which comprise two or three superblocks. The latter has a dimension of 500 mt by 300 mt. Combined, they form an elongated rectangular megablock of 500 mt by 1 km. In the central part, two special blocks are treated differently from the other five areas as they exclude zones in their proximity. The 1' area on the left is next to a large train depot and the Road Traffic Authority Dobong DMV. A project to transform the

depot area into a science centre has yet to start. The 2' on the right of the central artery excludes an already established area further transformed into a commercial cluster.
The central axis of Donggil-ro defines the project, with the Jungnangcheon stream on the west and Suraksan Mountain on the east. The central spine defines the linear city's main ribbon, from which the megablocks are created on its east and west sides. The geometry of the megablocks is determined mainly by the geographical setting, as the area between the stream and the mountain defines its longitudinal dimension. Instead, the roads crossing the river east-west define the horizontal dimension. The schematic nature of the following diagrams allows us to grasp the main conceptual features of the intervention as the actual application had to modify the rigidity of the scheme, assimilating the actual condition of the land. However, once compared with the final design, the diagrammatic strength of the concept is clearly perceivable.

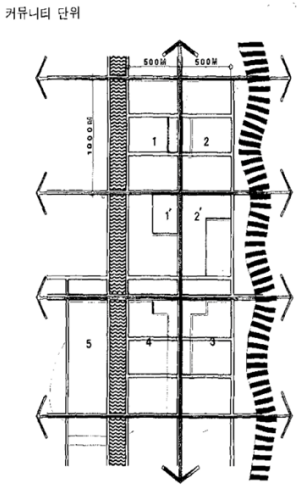

Figure 1. Diagram showing the five "Community Unit"

The second diagram (Fig.2) lists the five megablocks with their subsidiary superblocks. Each megablock contains two or three superblocks, which then contain minor blocks subdivided by smaller internal roads—not visible in these diagrams but explained in the last of the four diagrams. The composition of superblocks into megablocks forms an elongated rectangle on each side of the central Donggil-ro.

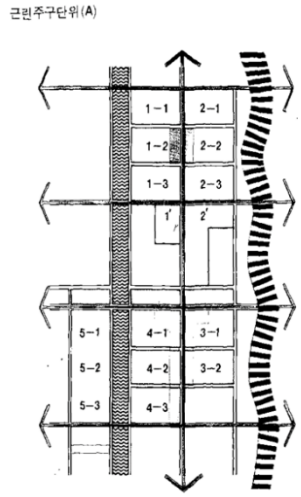

Figure 2. Diagram showing the megablocks divided into subsidiary superblocks

The last diagram (Fig.3) is important as it shows the structure of the megablock system, which nests smaller blocks inside. The system has three different levels: the “Community Units” (that I call megablocks), the “Neighbourhood Units” (superblocks), and the “Neighbourhood Unit Subdivision” (regular blocks). Starting from the latter, the buildings, mainly slab residential housing blocks of twenty-five floors, schools, commercial buildings, public spaces and parking areas, are organised in regular blocks determined by smaller internal roads for slow traffic. These internal blocks, together, form the second level, the superblock. Then, the planner organised facilities at the urban level, thanks to the aggregation of two or three superblocks together, forming the five areas we see in the first diagram. For this reason, it is now important to look at the overall design of the area and analyse the zoning in detail.

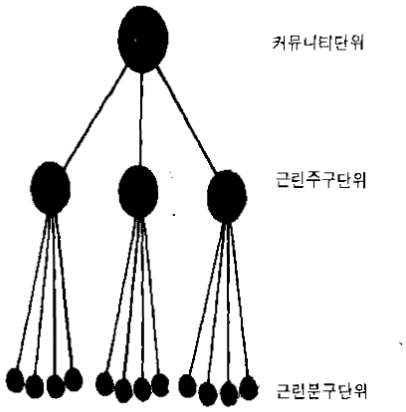

Figure 3. Diagram showing the structure of the megablock system

The diagram below (Fig. 4) shows the different areas of the project. Most of the land is for residential areas. Semi-residential areas are hybrid buildings with commercial spaces integrated on the first two floors. Those are rare in the whole project and located along Donggil-ro’s main artery. Commercial areas are mainly located between two horizontal roads in the middle of the project. In the northern part of the project, the commercial area is in the centre of the boulevard, also hosting the Madeul Station of line 7. On the southern part, the commercial area is located along the blocks facing Donggil-ro. Parks and green areas are scattered in all the blocks in the project. Thus, the idea was to create numerous smaller pocket parks instead of a single large one because Suraksan Mountain is used as a public park and easily accessible from the area. Other zones include different levels of schools, from elementary to middle and high schools. And hospital and welfare areas.

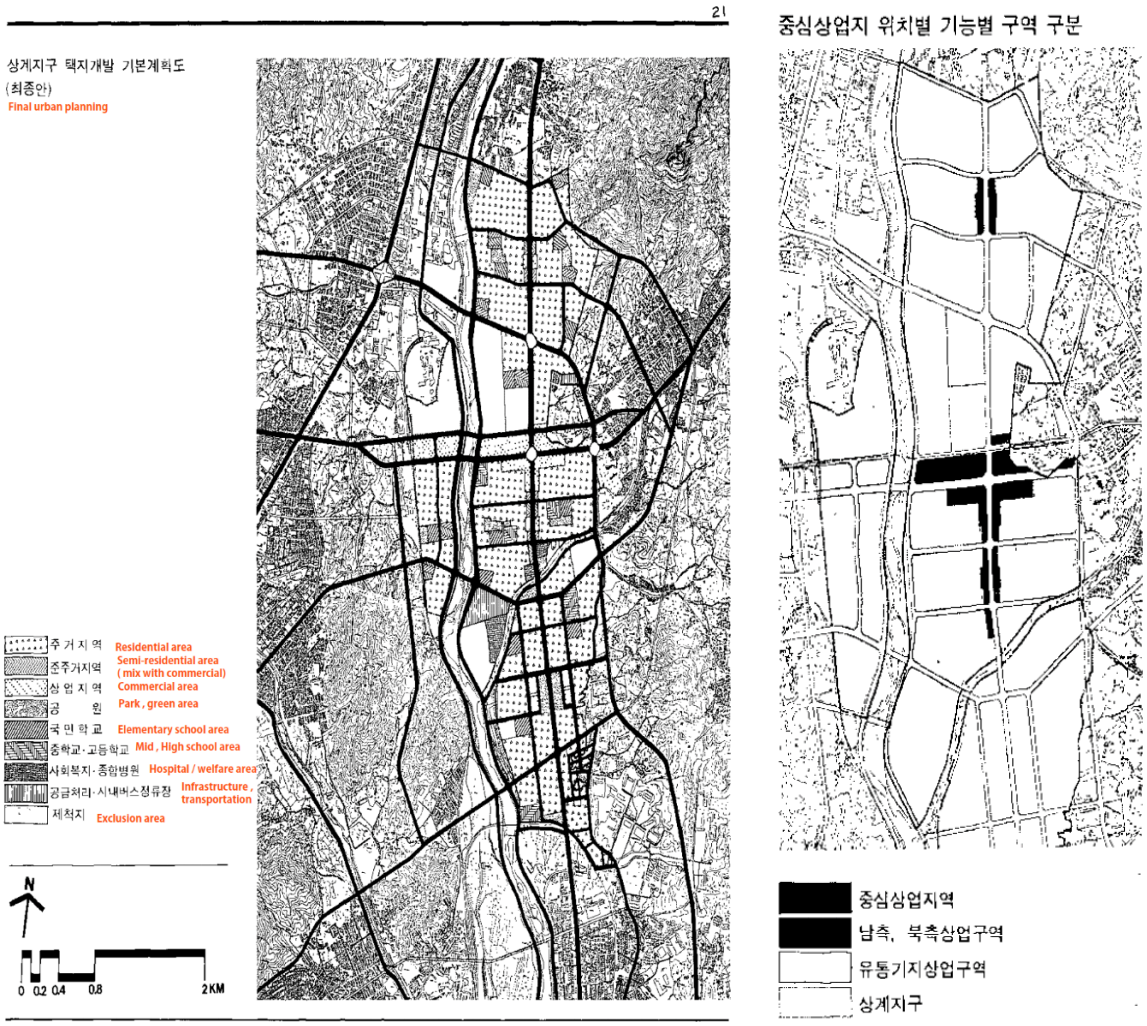

Figure 4. Diagrams showing the area of the whole project (left) and the specific area studied for this research (right), which comprises the north part. The black fill shows the commercial areas.

SURVEY

Apartment complexes and their borders

The apartment complexes in Seoul are usually designed as gated communities, although not for security reasons, as in South Africa or Brazil, but because they create an idea of exclusivity. Throughout the district, I noticed that the border of these residential complexes was porous, so no proper walls were built, as is usually the case for most of the apartment complexes in Seoul. In Sanngye-dong, a well-kept landscape, defines the border between the private and the public realms. Still, there are several access points for pedestrians between the two areas. Sometimes, the division of the two zones is realised only thanks to a low metal fence of just 20 cm tall (Fig. 5). The result is a positive flow of the space between the blocks and the streets. This openness is unusual in apartment complexes in Korea, as proper fences and walls taller than two meters are generally employed to define private property. However, in properly enclosed residential complexes, pedestrian access is not strictly controlled, as only cars must go through gates, while people have free access. (Fig. 6).

Figure 5. Low fence to define the border between the public and the private realms. It is unusual to see such a low border between the residential complex and the public space as this limit is generally realised with proper walls. In Sanggye-dong, there is a sense of porosity between the two spaces for pedestrian people. Source: the author.

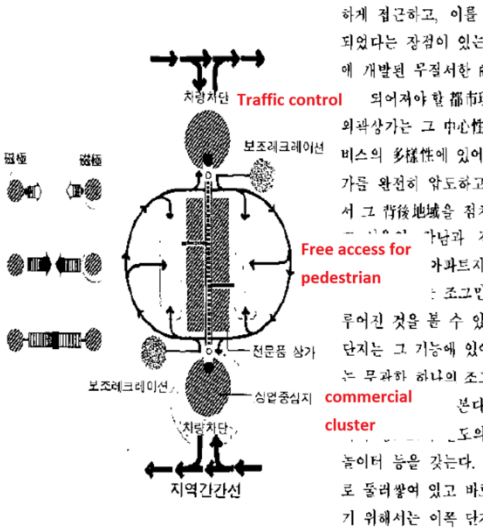

Figure 6. Diagram (page 45) that shows the idea of free circulation among the blocks

The megablock internal space consists of playgrounds, paths, and parking.

Within the megablock, there are several levels of circulation systems. Secondary roads meanly lead to parking lots located between the slab buildings. Along these roads, there is always a pavement for pedestrians. The overall quality is high as the roads are for low-speed mobility, and the pavement is

well-detailed and bordered with a well-maintained landscape, enhancing the positive experience of the pedestrians within the block. Furthermore, pedestrians have many internal paths connecting the buildings' entrances in the complex and the main roads at the block's perimeter. Many people use these ways to get to or from public transportation.

These routes are pleasant to walk, as the greenery is a constant feature, providing a quality experience for the users. At the same time, the space is relatively compact, with several features organised, such as benches, machines for physical exercise, and small gardens. Thus, this green space is unlike Le Corbusier's "Towers in the Green," where the park was an undetermined continuous space. Instead, the space is determined here by precise footpaths, dedicated play areas, and gardens. It is not an expansive park but a compact system of classified green areas interspersed by parking lots. The trees also play a crucial role in filtering the repetitive surface of the building's facades. However, the experience is limited because no shops are in the block, as they are usually located at the perimeter to serve people from other blocks.

Isolated commercial buildings

Few commercial buildings (*sangga*) are along the main roads as they do not encircle the megablock like in the Gangnam district. In Sanggye-dong, these types represent the 1980s aesthetic through the colourful tile-cladded facade. The building in Fig. 7 contrasts sharply with the monotonous white facade of the surrounding apartment buildings. The standard composition of a side stair leading to a main space is here slightly articulated by the round shape of the core. These buildings want to create an attractive point for the inhabitants, containing a condensed vertical version of the shopping street, hosting different functions at all building levels. Except for the commercial clusters close to the Nowon station, dispersed commercial buildings are along the main roads and within the residential complex.

Figure 7. A commercial building along the main road. Source: the author.

Another commercial building in the area (Fig. 8) is enriched with an imitation of a mansard or French roof. However, it is a typical Korean 1980s commercial building that accommodates a variety of

functions at multiple levels. On top of the stair core that protrudes from the roof is an imitation of a bell tower or a Gothic pinnacle. It is another common feature of these modern areas where a rational subdivision of building types allows unexpected juxtaposition of functions, such as a small church within a standard commercial building, above convenient stores, butchers, hairdressers, English academies, etc. This building is located on a public road as the residential towers behind are not built within an enclosed area, as is usually the case for large apartment complexes. From the image, we can grasp how these small commercial buildings play a pivotal role in the functional mix of this compact area. However, only when more commercial buildings form a cluster is there potential to generate more opportunities for social aggregation.

Figure 8. A commercial building on a small public road. Source: the author.

The commercial cluster

The commercial cluster near the Nowon station on line 4 comprises standard buildings for various commercial activities. The metro line and the station are elevated from the ground, with a four-line road underneath them, the Sanggye-ro. The line intersects the Sanggye-dong neighbourhood horizontally, subdividing the analysed area into the north and southern sections. In the station's proximity, the streets are mainly pedestrian on both sides, and the buildings are between two to five storeys high. Only the commercial buildings facing Nohae-ro, the major parallel road south of Sanggye-ro, are more prominent and taller, with an average of ten storeys. At the crossroads between Nohae-ro and the major north-south artery Donggil-ro, there are more iconic buildings, such as the Lotte department store and large office buildings (Fig. 4).

The space between Sanggue-ro and Nohae-ro is relevant for this study as it is a typical commercial cluster composed of multistorey standard buildings capable of accommodating a variety of businesses

stacked vertically. The facades are thus full of signs conveying the interior use to the people on the street. The space is compressed as the roads are relatively small for pedestrian usage (Fig. 9). The streets in this area are regular and create smaller blocks, forming a commercial megablock measuring 550 by 130 meters. The place is particularly lively at night when the neon signs glow. There is a resonance with the amusement park notion, where attractions are advertised, and people are constantly bombarded with information. Simultaneously, the commercial cluster is a social attractor as many of the buildings' ground floor functions are restaurants and bars.

Figure 9. Commercial cluster between Sanggye-ro and the southern Nohae-ro. Here, the commercial buildings are two to five stories high. Commercial signs dominate the image of the area. Shops and restaurants are the main attractions. Source: the author.

There are also some tiny alleys opening up between the main pedestrian roads. In these streets, the restaurants and bars are smaller and more informal. Seoul, and South Korea in general, is full of these contrasts, where informality pervades the existing building through spontaneous adaptations that counterbalance well-maintained roads full of established brands. From Fig. 10, the extension of the internal space on the road is visible through temporary light structures. In reality, this space is permanent, and the appropriation of the space is definitive. Coexistence is, in fact, a fundamental phenomenon in the Korean urban environment, where order and disorder, planned and informal, form a continuous interwoven fabric.

Figure 10. Small alleys in the commercial cluster between Sanggye-ro and the southern Nohae-ro. More informal bars and restaurants are present in the tiny alleys. Source: the author.

Northern from Sanggye-ro, a smaller commercial area is present. It is surrounded by the Sanggye Jugong 7th Apartment Complex on the west, the Nowon Hyundai Apartments on the north, and the Sanggye Dongyang Apartments on the East. A more organic street pattern characterises this commercial part, the result of the informal lot subdivision that was already present when the main urban plan of the neighbourhood was developed. This spatial characteristic makes the area feel like a small village, as the roads are quite small, compressing the space and facilitating pedestrian circulation and some level of social aggregation. However, the commercial nature of the area is still the dominant characteristic. A negative aspect of the place is the lack of open spaces for resting and socialising. However, the contrasting effect produced by this area, compared to the regularity and orderliness of the apartment complexes surrounding it, is striking. Here, a multitude of activities are run on multiple levels and advertised with colourful signboards, giving a sense of dynamism, which is an essential part of contemporary Korean cities.

CONCLUSION

Seoul's urban fabric presents a dynamic interplay of tradition and modernity. The modern megablock also encapsulates this phenomenon, mainly thanks to the commercial areas and their varied functions. The Sanggye project is rooted in modernist precedents and ideals. However, it accommodates diverse functional programs and fosters public exchanges. Commercial activities within and around the megablocks serve as a critical catalyst for social interaction, bringing people together and activating public spaces. The strategic placement of commercial clusters not only supports the local economy but also enhances the vibrancy of the urban environment, transforming them into lively social hubs. As cities worldwide grapple with increasing density, Seoul's example of significant urban expansion

during the 1980s offers valuable insights into balancing large-scale infrastructure with community-oriented spaces for a sustainable and liveable urban environment for the future.

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LOSS OF FREE CITIZENSHIP?

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INTRODUCTION

Today, we are in the danger to lose a crucial cultural value that originated in European cities: the idea and concept of free citizenship, the base of democracy. Free citizenship has been connected to the notion of the city as such, originating from the Greek Polis and kept alive since then, in many different versions. In historical terms, no other culture than Europe has developed the concept of a free citizen, actively participating in the political, social, and architectural shape of the city. Both as an ideal and a political guideline, that concept has been adopted worldwide and is closely related to human rights, democracy, and human dignity.

STATUS QUO

Free citizenship includes spaces where the citizens could meet, spaces originally designed as communal, or public spaces designed as *places*. In contemporary cities, the relationship between public spaces and the citizenship is increasingly neglected, as we observe a noticeable decline in the availability of public spaces where individuals can congregate and linger without the explicit intent to consume. Instead, developments under the so called concept of 'defensive architecture'[1] are being advanced, explicitly designed to actively prevent 'undesirable' (i.e. non-consuming) behaviors. A striking example of this trend can be seen in park benches engineered to be unsuitable for lying down in order to nudge low-income citizens to abandon certain areas. While this example is undoubtedly provocative and deliberately pointed, we nonetheless wish to pose the question of whether it is truly prudent to construct *antagonistic architectures*, or if a more appropriate approach might be to pursue urban planning that can be characterized as *resilient architecture*[2] —namely, architecture that emerges from democratic principles (i.e., the concept and *eidos* of free citizenship) and that may also be capable of resisting capitalist driven forces.

We observe that many social practices that were once typically 'public' are increasingly being transferred to virtual/digital spaces. This includes activities such as meeting new people, dating, socializing, forming opinions, exchanging information, and particularly exerting political influence. In this globalized and virtual world, we are witnessing a redefinition of the concept of 'home'.[3] With respect to the vast user bases of platforms like Instagram or LinkedIn, the world's largest metropolises are no longer physical 'cities' but have become virtual *platforms*. The pointed saying "Home is where wifi connects automatically" appears to have become a reality in contemporary life.[4] Although this trend certainly warrants critical examination, we would nonetheless like to emphasize that the social practices— which are rooted in the continuity of free citizenship—have not lost their relevance. A

significant portion of the population remains interested in these practices; however, they no longer engage in them within regional and physical spaces, but instead shift these activities into the digital realm. The issue with this shift is twofold: on the one hand, digital platforms are centrally controlled and must subordinate themselves to the social and cultural pressures of their financial backers (i.e., the advertising industry), which significantly constrains the freedom and potential for interaction among individual users. On the other hand, physical cities continue to provide a substantial portion of the necessities for daily life. As a result, when the populace confines its engagement to digital spaces, a power vacuum emerges in local areas, leaving decisions about the physical environment to be made by a small group of decision- and policymakers "as the sole agents responsible for managing land and urban development".[5]

The 'generic city'

The underlying cause of this 'shift into the virtual' is not the advent of digital possibilities, but rather the deliberate effort to reduce cities to mere infrastructure or consumer objects that are treated as investment and speculation assets, optimized solely for their marketable qualities. Consequently, cities are no longer perceived as social and political networks but are transformed into 'generic cities' functioning uniformly across the globe—Koolhaas compares this form of urbanism to an "airport", suggesting that the city lacks identity and character, serving merely as an infrastructure provider for its *paying* residents and users.[6] A city (or an urban situation) historically fulfilled two fundamental social functions: on one hand, it was the locus where essential needs (such as security, infrastructure, and shelter) could be met, while on the other, it served as the fertile ground for the development of human (self-)consciousness, both at the individual and collective levels.[7] It is to be assumed that, particularly, the second aspect of the city has significantly diminished in relevance.

The fabric of space: hyperrealities vs. narratives

This trend has been recognized and addressed by decision-makers and urban planners through initiatives aimed at enhancing the distinctive character of cities. However, the challenge lies in the fact that the *atmosphere* or *genius loci*[8] of a place cannot be artificially or deliberately created through planning.[9] As a result, these planning efforts often produce mere imitations of 'functioning' urban situations, comparable to the hyperreal but ultimately superficial space such as a theme park.[10] "We are the only species that lives in zoos of our own design."[11] writes Christopher Ryan—therefore these planned places should therefore be viewed as simulations,[12] as *replicas* of a space. In a pointed critique, gardens are replaced by parks and forums by malls, resulting in a hyperreality[13] that mimics a genuine environment.

This observation warrants a theoretical consideration of spaces by first examining the distinction between a place and a space, and then exploring the transformative process of this place into a space. While the phrase 'place' denotes a topographical-geometrical entity (Greek '*topos'*) it must be distinguished from the concept of space ('*spatium'*), which emerges as a network of meanings within the individual—and therefore always subjective—imagination.[14] Given that space is thus formed intrasubjectively, it becomes evident that the actual possibilities of intervention by the planner (i.e. the architect) are significantly limited. Rather, it is the *narratives*, the ascriptions to the place,[15] that transform it into a space.[16] For instance, an abandoned industrial site may be perceived merely as a physical location with no inherent meaning. However, when artists and community groups begin to use this site for cultural events, it gradually gains a new narrative that is created by the users of this space. It becomes a space where creativity and community engagement thrive, shifting from a mere geographical location to a space rich with cultural significance and social interaction. Thus, narratives that emerge organically by the citizens interacting with a place are crucial, as they transform this

topos into a *spatium*. This phenomenon is also a key reason why, on a large scale, many planned cities fail,[17] and on a smaller scale, why numerous local projects aimed at improving the quality of public spaces do not achieve the desired outcomes.[18] This occurs either because the narrative aspect is entirely neglected in the planning process, or because the narrative is imposed upon the space and its users by decision-makers as a form of PR strategy. It is therefore crucial to emphasize once again that narratives must emerge organically from the population itself and, depending on the context, should draw upon a historicity that cannot be created artificially.

PUBLIC PARTICIPATION—A MITIGATION STRATEGY?

Broadly speaking people resist externally imposed paradigms, which is an inherent feature, not a bug, of democracy—a phenomenon that is also true in regard to urban planning. Instead of presenting the inhabitants and future users with a fait accompli many planners and decision-makers created initiatives that aim to involve the broad public in the decision and planning process.[19] While many of these approaches seem to be promising, they nevertheless present a multitude of problems.[20] It has become apparent that many social milieus do not participate, or do so only to a very limited extent, in this democratic process, despite being future users of the space or infrastructure. The reasons for this are varied, including lack of information, lack of perceived self-efficacy, lack of perceived representation, linguistic or cultural barriers, etc.

While it is beneficial to open the planning process and bring as many diverse stakeholders to the table as possible, this approach is equally problematic for several reasons. Firstly, it is observed that many planners engage in public inclusion only on a superficial level solely due to external pressures and, therefore, aim to minimize actual involvement. This results in a process that is not genuinely democratic but rather opaque and bureaucratic, driven by committee and panel decisions, inherently designed to preserve existing power and influence structures. Secondly, the very concept of involving the public in the *planning* process is inherently problematic because its potential for intervention and change exists only within the confines of this conceptional stage and does not extend to the actual stage when the architecture is actually used.

Again, it must be emphasized that places can only be transformed into spaces through narratives and *interaction*.[21] This means that a place requires an inherent potential for change and (co-)creation even *after* the planning stage. Spaces must therefore be constructed in such a way that they can not only be utilized but also dynamically shaped by the citizens, meaning they must possess the potential for change, allowing for different actualizations to emerge according to need. This can only be partially achieved through planning; fundamentally, it is a deeply political decision. The goal is not to create a place that can adapt to several *predefined* usage scenarios, but rather to create a place whose individual design and narrative can be defined by the inhabitants themselves. This implies that designers and decision-makers must relinquish a significant portion of their control and power of definition.

Interestingly, similar discourses were already being conducted around 1800, not in urban planning or architecture, but in literature. At that time, the question arose whether an author (analogous to the architect in our context) could relinquish control over the interpretation of their work. By 1800, this discourse had evolved to the point where readers were considered the true authors by actualizing a text into a genuine message through interpretation. This meaning is always tied to the subject, resulting in a plurality of meanings that emerge from a text—a finding encapsulated in the pointed statement that ‘the author is dead’.[22] The task of an author, then, is merely to create the framework for actualization, meaning to write a text in which the potential for change is inherent. Before we address the question of whether a similar development can also occur in architecture, we would like to introduce a brief digression: As we outlined at the beginning of our essay, significant practices that

typically took place in public spaces have shifted to the virtual realm. The allure of these digital realities may be so strong precisely because they embody the *narrative* of changeability. Etymologically, 'the virtual' can be translated as the potential/the power for change.[23] Even though the actual scope for action on major virtual platforms is limited, they still *convey the narrative* that each user has the ability and freedom to shape, contribute to, modify, adapt, and rethink the given space.

This means that urban spaces must also be evaluated based on the narratives they convey. It is crucial to remember that a place can only transform into a meaningful space when the *topos* is actualized into a network of meanings by the users. Just as readers in the 1800s inscribed meaning into a text, users of urban architecture must 'inscribe' meaning into the place.

'EIDOS' AND 'ALLMENDE'

Once such clear scope for action and design competence is entrusted to the users, it is essential that these possibilities are also communicated to them. Therefore, *ideas* are needed on how to create public spaces that possess and *articulate* these inherent self-dynamics. We deliberately use the term 'idea' here because we want to emphasize that we are not referring to theoretical and conceptual planning, but rather to a culturally embedded notion ('meme') that can be understood through the symbolic[24] concept of 'eidos'. We interpret the concept of an idea as a bilateral process: on the one hand, within the context of creativity and creation; on the other hand, as an articulation pattern (i.e. the *eidos*) that arises as a product of imagination. This means that an idea can originate either in the realm of design or in the realm of situational evaluation by users, who develop a conception of how a place can be engaged with. This bilateral process, therefore, suggests that users and designers converge in their interaction practices, meaning that users themselves become effective actors. According to Richard Dawkins, 'memes' can be interpreted as culture-specific patterns of information that operate within a symbolic paradigm.[25] In our specific context, it is necessary to develop a pattern of information that, through a systemic integration of vision, idea, and self-efficacy, constitutes genuine agency among the populace, thereby aiming at actual interactivity of the place. While meme theory is grounded in anthropology, the concept of 'patterns' can also be applied to architectural theory. Specifically, we wish to draw on Christopher Alexander's work, *A Pattern Language*, to argue that architectural theory has already established the 'idea' that aim at fostering genuine agency among all stakeholders. It is therefore essential to develop a Pattern Language that, through genuine interactivity, seeks to elevate residents to the status of citizens. *A Pattern Language* also makes clear that the idea of citizenship ('civitas') is characterized not only by rights but also by the duty to participate actively.[26] Thus, there must be areas within a city that not only allow for such participatory work but rather shift the notion of participation from solely engaging in the decision-making to the actual creation of space.

We want to emphasize that this is by no means a novel idea—concepts such as the commons (better framed by the old German term '*Allmende*') or communes were widespread in Europe until the early 20th century.[27] The commons, in particular, which refers to areas of a settlement that could be used and shaped by all residents equally, has a long cultural history; evidence of the commons can even be found in the Old Testament (cf. Ezekiel 48,14–17). The commons clearly illustrate how societal and spatial-political phenomena synchronize, as demonstrated by the following example: The commons of a European village typically included the village pond, which was used not only for communal fish farming but also as a firefighting reservoir. The maintenance of the pond was the responsibility of all villagers, just as was the service in the fire brigade. Thus, the commons is not a phenomenon created as a pedagogical tool for the population by decree or out of pure idealism; rather, the intrinsic nature of the space demands the active involvement of each individual within the community.

Gentrification as 'diagnostic tool'

Certainly, this type of commons can only be established within manageable sizes of local communities. To avoid steering our essay too much into a historicizing discussion, we would like to focus on current developments in urban planning within a globalized reality not structured by local micro-communities. Specifically, we aim to explore whether such spaces can be planned and conceptually created, particularly within the modality of *eidos* outlined above, or whether they must rather emerge 'organically' in the sense of an "informal"[28] grassroots development.

To address this question, the phenomenon of gentrification presents itself as a pertinent case, which, we argue, exposes the central characteristics of urban spaces to a significant extent.[29] While it is undeniable that gentrification is a symptom of a 'sick' urban situation,[30] the genesis (i.e., the emergence) of this symptom points to aspects worthy of examination. It is observed that gentrification occurs in places that were previously 'failed' in terms of urban policy, yet it is precisely through this failure that they gained an autodynamic potential. Suddenly, in these places, genuine creation became possible due to the absence of commercial interest and the devolution of local political stakeholders.[31]

The metaphor of the grassroots movement, which we wish to employ here, suggests the functional principle by which this urban wasteland was newly developed. The redevelopment occurred 'from the bottom up', attracting typical socio-cultural milieus who pioneered the re-purposing of this wasteland: students, artists, low-income individuals, but those with strong social structures and agency, who endowed these places with narratives through *cultural work* (Greek *cultura* = development, processing, ordering, maintenance), thus transforming them into spaces. It is notable that these newly emerging attributions to these places were either never planned or their original 'inscribed' meaning was overwritten by new narratives. These attributions are in constant flux, meaning they do not aim for coherence but are rather characterized by their pluralistic nature that is distinctly dynamic. Therefore, the space does not possess a single narrative but is continuously 'rethought', 'reinvented' and 'reinterpreted' i.e., *actualized* by its inhabitants/users in an ongoing process.

The issue is that, beyond a certain point of development, a tipping point is reached where the atmosphere of the place exerts such an attraction that it becomes commercially exploitable. The ensuing gentrification gradually replaces/displaces the organically evolved and perpetually self-updating narratives with *static*, artificial ascriptions. From this tipping point, as these spaces are 'enhanced' by external capital, a narrative decay sets in, particularly evident in the significant reduction of the individual residents' scope for creativity and agency. This narrative decline is also evident in the phenomenon that historic buildings and structures, unless explicitly protected under heritage conservation laws, are disappearing.[32] However, a historic cityscape is more than merely a collection of listed monuments; it also encompasses a multitude of architectural works that, while seemingly lacking individual historical significance—and therefore not adequately protected or entirely overlooked by heritage preservation measures—nonetheless contribute to a coherent and authentic urban landscape when considered as part of the ensemble. We wish to emphasize that the transformation of a 'functional' public *space* into a gentrified *place* is a narrative process, one that also manifests itself through changes in the architecture. The drive of gentrification to 'remediate' these places results in a hyperreality, akin to the aforementioned 'theme park', where the spatial and social structures merely serve as a backdrop for commerce, and the original pioneers are forced to move on due to economic pressures. One might argue that this constant oscillation between construction and decline, renewal and tradition, is a fundamental characteristic of the city, akin to a natural law. But what happens when no free spaces can be established because the financial value of real estate remains so high even in 'failed' neighborhoods that even vacant spaces are profitable investments so no pioneering culture can develop?

CONCLUSION

In conclusion, our paper highlights the crucial transformation and potential loss of the concept of free citizenship, a cornerstone of democracy rooted deeply in European history and urban life. The analysis underscores the troubling trend of diminishing public spaces and the rise of political and architectural decisions, which collectively restrict citizens' engagement in public life and challenge the essence of cities as social and political networks. The shift towards virtual spaces for social and political activities further exacerbates this issue, as the physical spaces seemingly lose their roles in fostering community and civic identity.

On the one hand the concept of the 'generic city' and the transformation of urban areas into mere infrastructure or consumer objects strip cities of their unique identities and reduce them to uniform, characterless entities. On the other hand, characteristic areas of a city are transformed into hyperreal backdrops due to gentrification and financial pressure, displacing the original residents, their social culture, and the *atmosphere* they created, stripping the place from any symbolic meaning (i.e. its *eidos*) and reducing it to its marketable attributes. This reductionist view contrasts sharply with the historical role of cities in meeting essential needs and nurturing human consciousness. Efforts by urban planners to artificially recreate the *atmosphere* or *genius loci* of cities therefore often result in superficial spaces that fail to resonate with the authentic narratives and interaction patterns of their inhabitants.

Mitigation strategies involving public participation in the planning process offer some promise but face significant challenges. Superficial involvement due to external pressures, limited genuine democratic processes, and the restricted scope for public intervention during actual use of spaces are key issues. We suggest that places must be designed with inherent potential for change and co-creation, allowing residents to shape and redefine spaces dynamically. This approach demands a relinquishing of control by designers and decision-makers, akin to the concept derived from literature studies where readers, not authors, actualize texts into genuine messages. Therefore, an architectural paradigm is needed that enables the inhabitants to actualize places into *their* spaces.

NOTES

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FUTURE PROJECTIONS OF THE CITY IN HOUSING PERSPECTIVE: THE EXAMPLE OF ISTANBUL

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INTRODUCTION

Cities are living organisms that accumulate their own memories and can also be defined as an interactive, dynamic system existing in the coexistence of interrelated but different spaces. Just like a living organism, as its parts shape the city, the city advertently shapes itself. In this endless interaction and transformation, housing environments play the most important role. Therefore, in this article, aiming to produce foresights about the future city, the examination of housing and transformation of the city are adopted. For this purpose, a metaphorical relationship has been established between the city and the human body to predict the future, with the research strategy being based on this relationship. Just as the examination of the human body reveals possible situations that people may encounter in the future and various precautions are taken in this regard, it has been assumed that the possibilities regarding the future of the city can be revealed in light of the data obtained by examining the city and strategies can be developed in this direction.

Research Strategy

This article investigates the use of deep knowledge and experience of the city to foresee the future in the context of housing, in the case of Istanbul. The research uses quantitative research (analysis of housing structures, distribution of housing types), comparative analysis (analysis of the transformation of different regions) and GIS analysis (spatial distribution of housing settlements, urban morphology analysis).

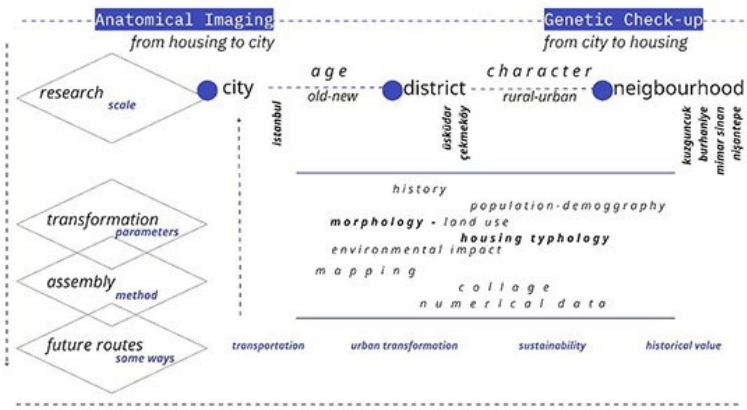

Figure 1. Research strategy.

Firstly, housing mapping in Istanbul from the past to the present has been presented with collage and numerical data, critical thresholds, transformation and metamorphosis processes have been examined. This is a kind of anatomical imaging with a metaphorical approach. The expression "anatomical imaging" used here metaphorically connects the past, present and potential future and points to the visibility of the traces of the current knowledge and different layers of the city. With this imaging, firstly Istanbul as a whole, secondly 4 neighborhoods determined with their unique characteristics in the city-housing intersection have been examined. The research conducted on this scale has been explained with the metaphorical approach named "genetic check-up". With this strategy, the areas have been examined, various indicators have been determined. In the end, future possibilities have been discussed based on these indicators (Fig.1).

FINDINGS

Anatomical Imagining

Within the scope of the research, firstly, the historical change of Istanbul's urban macroform was examined through academic research, maps and quantitative data. Thus, critical thresholds, changes and transformations experienced in the city in terms of housing were determined. To make this information visible, the distribution of residential settlements in Istanbul were shown in relation to the place (Fig.2). The city population, which was 1.000.000 in 1950, increased rapidly to 4.500.000 in 1980, 11.100.000 in 2000 and 15.462.000 in 2020, approaching 16.000.000 in 2022.[1] Although the city has undergone many changes in its long history, what happened in the second half of the 20th century in terms of housing is critical. In the 1950s, new factories were established with the industrialization policies pursued by the state and the city received a lot of migration accordingly. With migration, informal settlement areas defined as squatter settlements began to form and urban expansion became visible. With the condominium and build-sell law that came into effect in 1965, the production of unqualified apartments in the city gained momentum.[2] In the 1980s, global movements and neoliberal policies began to have visible effects on the city. Furthermore, during this period, collective housing began to be built by the state and gated communities emerged. In the 80s, Turkey experienced not only a structural but also a socio-cultural transformation. The Marmara Earthquake occurred in 1999, many buildings in Istanbul were destroyed and damaged. The issue of urban transformation came on the agenda in 2000 due to the impact of the earthquake. Although it was initially adopted so that there was fast and resilient housing production, this goal was not accomplished. While the number of luxury housing of various types increased, the low-income group was pushed to the periphery and Istanbul grew uncontrollably. Mega projects such as Istanbul Airport, the Northern Marmara Highway have been implemented, and the city’s development towards the north has accelerated. The Canal Istanbul Project is still on the city’s agenda with its positive/negative effects if it is realized. The Kahramanmaraş Earthquake in 2023 brought to light the issue of a possible Istanbul Earthquake. Urban transformation activities have accelerated again, and housing investments and urban transformation have accelerated under titles such as “low-rise housing” and “horizontal architecture”. Besides, the city’s population has decreased for the first time in the last 100 years.

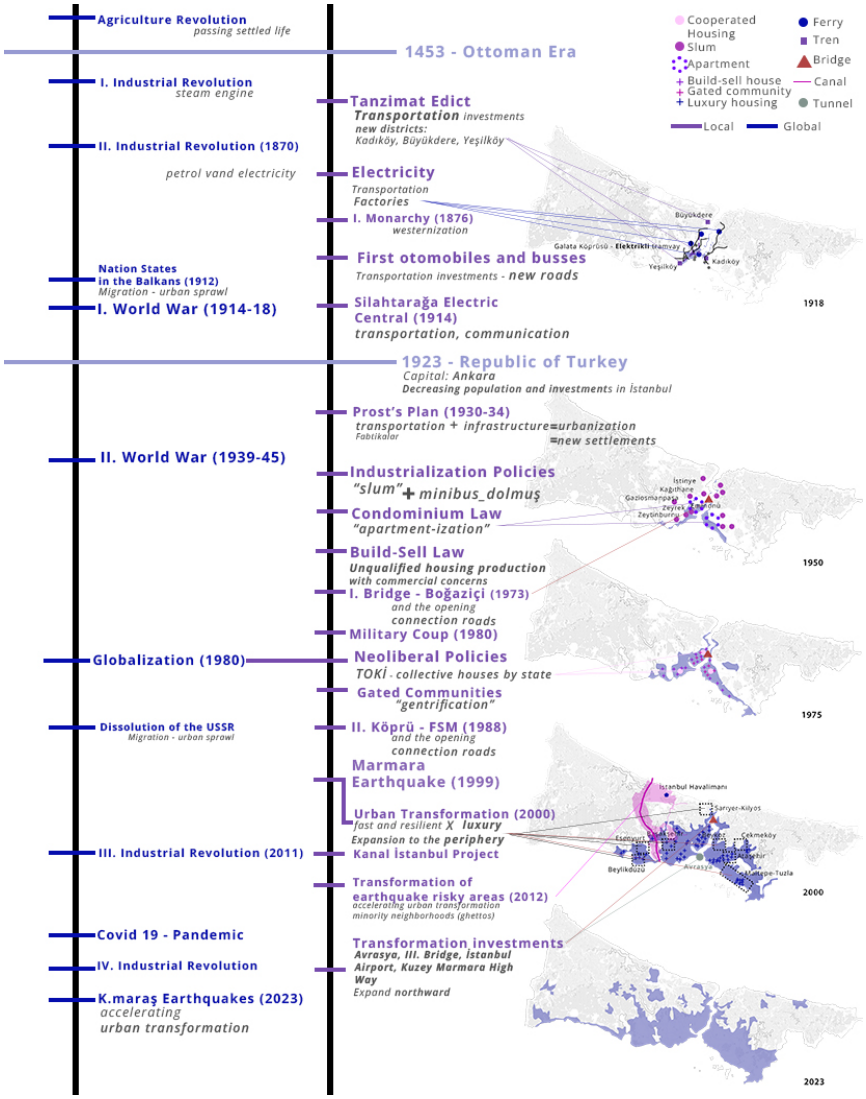

Figure 2. Events Affecting the Transformation of Housing in Istanbul

Istanbul also offers diversity and complexity in terms of housing. The current distribution of different housing typologies in the city was examined and the research areas were determined (Fig.3).

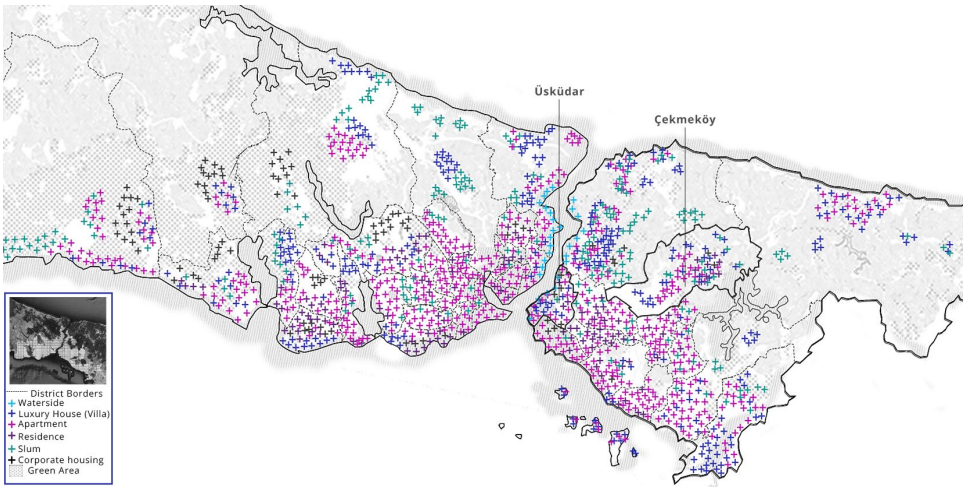

Figure 3. Distribution of Housing Typologies in Istanbul

The preservation of Kuzguncuk's local identity, the complete transformation of Burhaniye through urban renewal, the diversity and density of housing typologies in Mimar Sinan, and the dual rural-urban character of Nişantepe were examined; thus, areas with different characters (old-new, rural-urban) were evaluated together.

Genetic Check-up

The concept of city genetics is used to represent the elements determining the character and identity of the city. These elements consist of various factors such as the city's historical heritage, architectural structure, infrastructure, population, socio-cultural characteristics. For this purpose, the events that were effective in the transformation of Istanbul as well as the transformation of the regions were examined through aerial photographs, academic research, news, and urban decisions.

Region 1: Üsküdar

Üsküdar has undergone various changes in its long history. The first settlements date back to the beginning of ferry services in 1928. Afterwards, it continued to change with transportation investments such as bridges, tunnels and roads.

Üsküdar has a rich housing texture (Fig.4). A large part of this consists of apartments. There are waterside residences along the coastline and around the green areas, there is a concentration of luxury villa-type residences. However, in the inner parts, there are unique housing patterns intertwined with slums, collective houses and apartments.

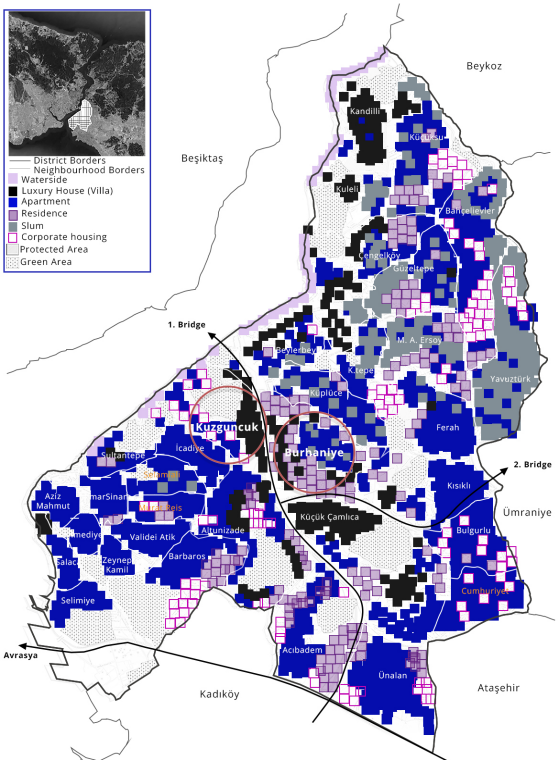

Figure 4. Distribution of Housing Typologies in Üsküdar

• Kuzguncuk is one of the oldest neighborhoods of Üsküdar and defined as an old Jewish Village.[3] Green areas largely preserve their existence and the giant-scale structures being noticeable in almost every part of Istanbul are not seen in Kuzguncuk. These features distinguish Kuzguncuk from other neighborhoods in Istanbul. When the population data of the region is examined, it is determined that its population is less and stable compared to other neighborhoods.[4]

It can be said that Kuzguncuk, which has survived to present day with historical bay-windowed houses, where a church and mosque are located in the same garden, hosts a multicultural and tolerant society. One of the most important features of the Kuzguncuk is the Ilya or Kuzguncuk Garden, as it is known today, dating back to the 1200s. This garden has been used by the neighborhood for years and has a significant role in the formation and preservation of the neighborhood culture. There have been many attempts to convert the garden to a construction zone but with the continued perseverance of the people it has been protected.[5] Furthermore, the traditional wooden houses, some of which are protected by law as immovable cultural and natural assets, also make Kuzguncuk valuable. Today, they are mostly used for commercial activities but there are also people still living in them. Kuzguncuk is one of the focal points of tourism with its preserved historical values (Fig.5).

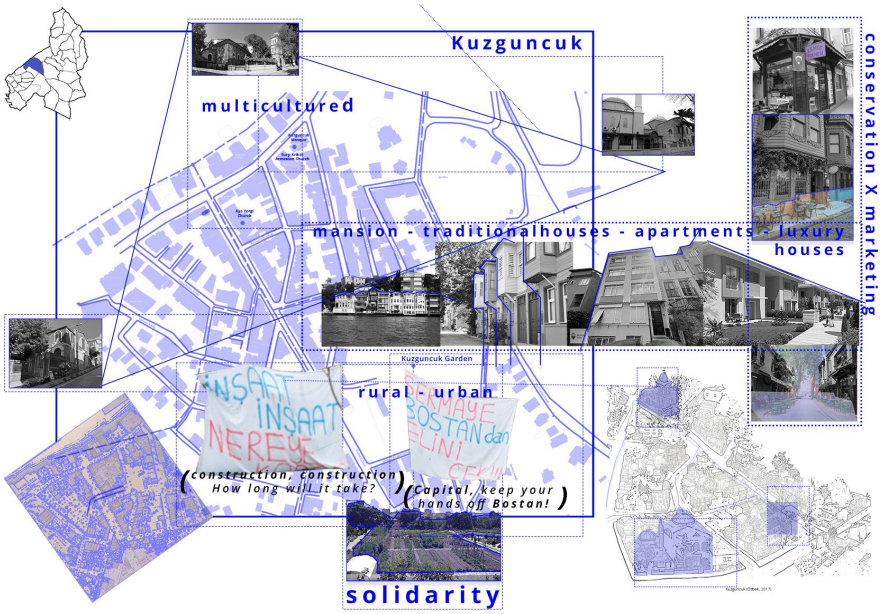

Figure 5. Kuzguncuk Genetic Check-up

• Burhaniye is one of the most changing neighborhoods in Üsküdar. When aerial photographs are examined, intensive construction can be observed starting as early as 2013.[6] When population data is examined, there is a big jump between 2007-2008.[7]

Burhaniye consisted of low-density slums and apartments. Today, there are various housing types: apartments, closed-collective housing complexes, luxury villa complexes, residences... The declaration as a risky area for an earthquake on 12.10.2013 was a critical threshold.[8] Then, urban transformation gained momentum and the density of the neighborhood increased. Transformations were criticized for the damage to green areas, the destruction of shantytowns where agricultural activities realized, and the construction of luxury housing by large companies after declaring lands belonging to citizens as reserve areas.[9] These developments physically and socially transform Burhaniye (Fig.6).

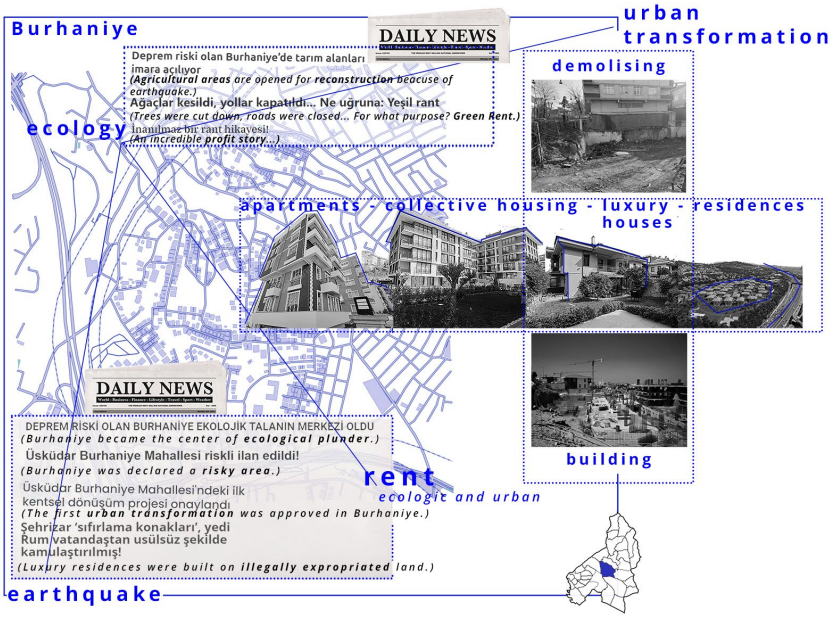

Figure 6. Burhaniye Genetic Check-up

Region 2: Çekmeköy

Çekmeköy was previously on the periphery and had a completely rural texture but it started to develop and urbanize rapidly with transportation investments after it became a district.[10] This situation directly affected the population, caused an increase in construction and a decrease in green areas. It can be said that Çekmeköy still has a lot of green areas. Investments such as the Şile and Northern Marmara Highway and the 3rd Bridge are very important in urbanization because there is a tendency/intensification of residential areas around it. In this article, Çekmeköy will be exemplified with its two neighborhoods: Mimar Sinan, Nişantepe (Fig.7).

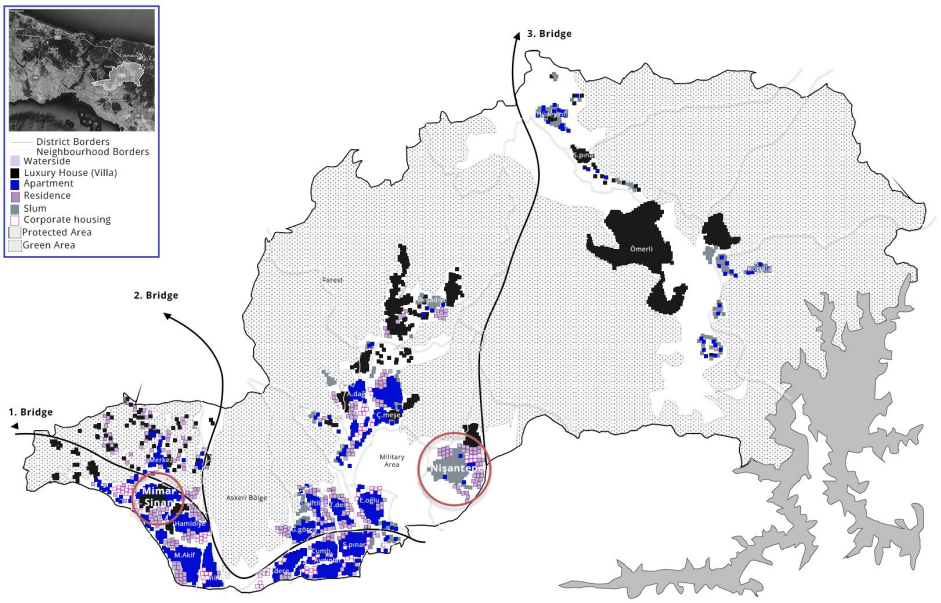

Figure 7. Distribution of Housing Typologies in Çekmeköy

• Mimar Sinan, located near Çekmeköy's 2nd Bosphorus Bridge connection, is one of the first settlements in Çekmeköy. Therefore, the population of the region has increased rapidly since 2009.[11] The region, standing out with forest areas, is today enclosed with luxury houses, especially with gated villa and high-rise housing complexes. While there were agricultural areas and forests in the 70s, today there are commercial and service buildings and residences. It is seen that luxury houses are concentrated around forest areas. When the promotions of housing projects in the region are examined, the emphasis is mostly on "nature" and the forested areas are used as a marketing argument in advertisements (Fig.8). The underlying concern for profit has affected the region ecologically and continues to affect it. As in Kuzguncuk, issues of branding and marketing the place are encountered here, but in Kuzguncuk, the emphasis on historical value is replaced by the natural environment in Mimar Sinan.

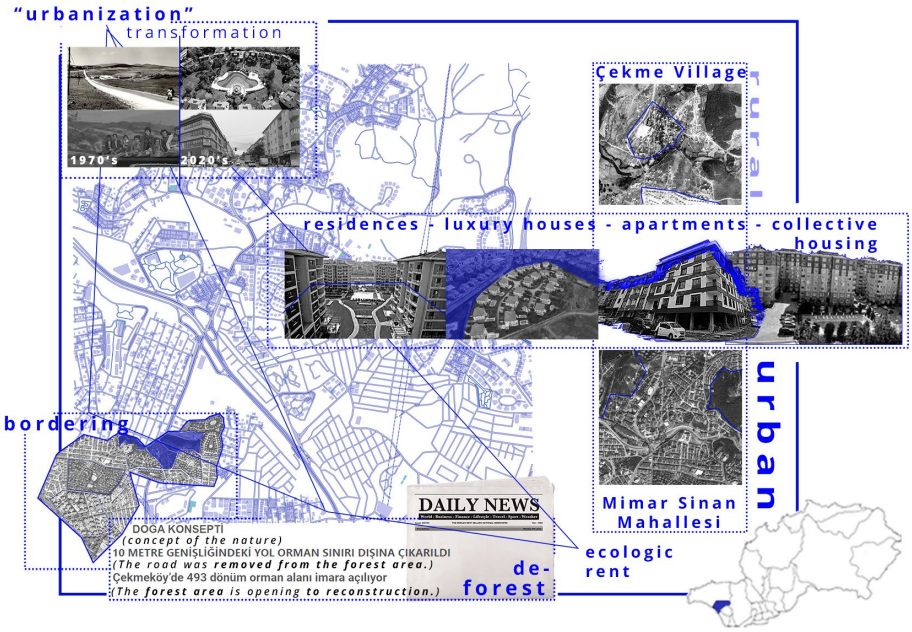

Figure 8. Mimar Sinan Genetic Check-up

• Nişantepe in Çekmeköy is surrounded by industrial structures and slums. It is located on the 3rd bridge connection road, which opened in 2016, and the Northern-Marmara Highway, which opened in 2020. In 2011, Özyeğin University was established in Nişantepe. With the construction of the campus and roads, housing investments accelerated. Then, many special education campuses were established here. In recent years, Nişantepe has become an attractive neighborhood for new housing production and urban migration due to its proximity to the university, qualified educational institutions and forests. The number of gated-housing complexes, villa-type houses, and population density continue to increase. Aerial photographs reveal the rapid transformation in the region.
DPN determined that urban poverty is experienced in Nişantepe.[12] Where Romani citizens live, is today surrounded by luxury houses. Housing investments inevitably bring social facilities to their environment. Many new commercial enterprises (cafes, restaurants, markets, pharmacies, etc.) have been established in the region and continue to be established. Although Nişantepe continues to develop, it still has rural characteristics, and activities such as animal husbandry and agriculture continue, even if it decreases. Thus, today, the region is physically and socially very heterogeneous.

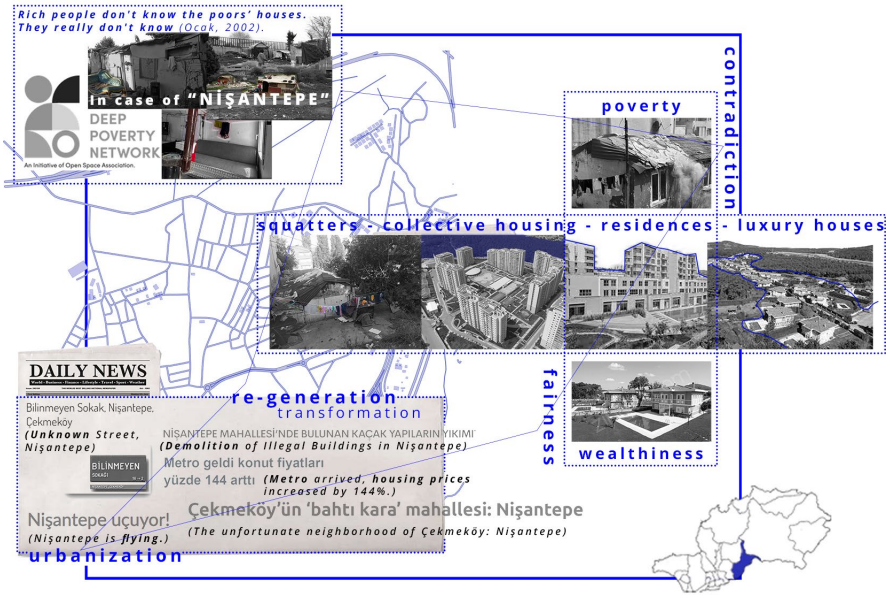

Figure 9. Nişantepe Genetic Check-up

TRANSFORMATION, INDICATORS, ROUTES AND THE FUTURE

In this section, the transformation parameters are presented in the light of the above findings by taking examples from the neighborhoods that were examined. Each parameter is related to each other through commonalities (Fig.10).

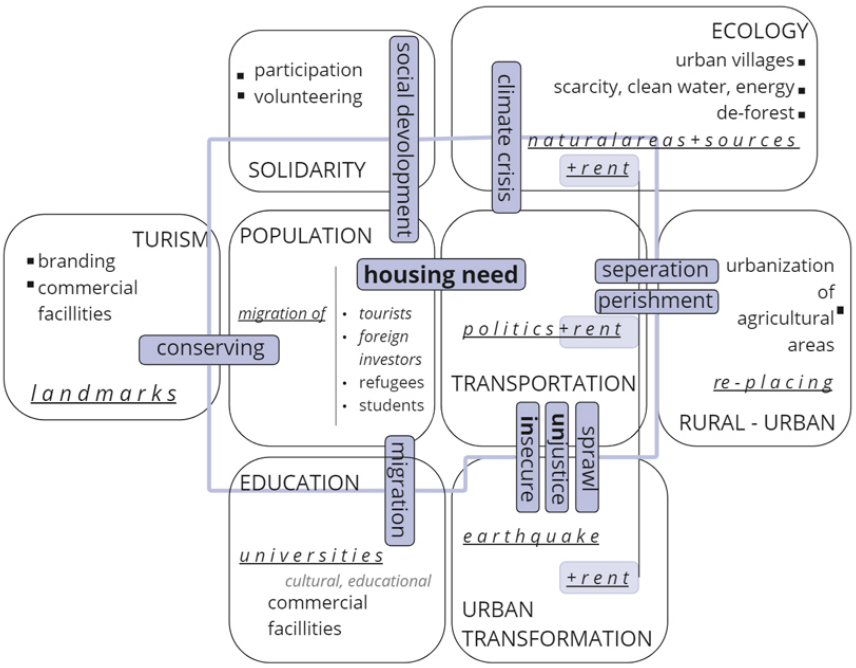

Figure 10. The Weave of Transformation

• Transportation decisions can be the most important factor affecting the city. For example, the issues standing out in the transformation processes of Üsküdar, one of the first settlements of Istanbul, are directly related to transportation investments. They have increased the urbanization speed and population. Similarly, in Çekmeköy with the opening of the 2nd Bridge, Istanbul began to expand

towards the north. These processes are also true for both Üsküdar and Çekmeköy through other transportation investments: the Şile and Northern Marmara Highways and the Üsküdar-Çekmeköy metro line. Also, as new settlements are formed, the population increases with them. This situation has sometimes destroyed green areas and led to the displacement of the population living in rural areas. The future of Istanbul depends on the integrated planning and management of housing and transportation decisions. In the urban planning process, housing projects and transportation infrastructure should be considered together and harmonized with each other.

• Istanbul faces rapid population growth and urban expansion accordingly. This situation strains the existing infrastructure and housing stock. Although urban transformation is seen as an opportunity for renewal and modernization, this potential hasn't been sufficiently utilized. In the case of Burhaniye, a rapid transformation process has been experienced and continues to be experienced. However, this transformation has been reflected in news headlines with expressions such as "green rent", "ecological plunder", "rent story". The determining factor in Çekmeköy's transformation process has been transportation decisions, and the transformation of Çekmeköy has created luxury and gated houses in the rural areas.

• Sustainability has critical importance for the future of Istanbul. Increasing population and industrialization cause environmental problems and decrease resources. Housing and commercial investments in areas, where new and luxurious residences are built, cause decreasing green areas. Policies and transportation investments are the main actors of this situation. New roads, housing investments destroy forests. In the examples of Mimar Sinan and Nişantepe, with forested and agricultural areas opening to construction, the green texture in the regions has been replaced by luxurious housing settlements and they are rapidly urbanizing.

• The historical areas of Istanbul are not only valuable traces of past but also inseparable parts of the city's identity, economy and culture. Therefore, the protection and sustainability of them is critical for the future of Istanbul. For instance, Kuzguncuk is one of the neighborhoods of Istanbul with historical value, hosting many cultures and wooden bay-windowed houses. Therefore, these houses have become one of the focal points of tourism with their unique and historical character. Their restoration and use in commercial activities have enabled the physical preservation of the cultural heritage and the development of tourism. Also, the increase in tourism and cultural activities, enables economic development.

The different parameters listed above and the relationships between them resemble a complex tangle of relationships, and it is quite difficult to predict the future of this complex system. Besides, re-thinking the cities' futures will improve our capacity to act with foresight and create resilient and livable places.[13] Accordingly, just like determining the future risks of the body after a check-up (heart-attack, diabetes, etc.), possible risks for cities can be made visible through mapping, collages, and current data, then precautions can be taken. Istanbul's rapidly increasing population has necessitated housing, and they have triggered transportation investments. Transportation investments have increased the urbanization pace. There are various risks that will be caused by this endless cycle. These risks can be associated with many issues such as crowds, traffic, chaos, damage to the urban ecology, and destruction of historical values.

• Istanbul is an important place for tourism with its history, location, and unique character. The focus on tourism in historical areas leads to increased commercial activities and boosts the economic value of there, which, in turn, affects life and housing. In many cases, historical houses have been re-purposed into establishments like restaurants, cafes, and art galleries. In the future, the preservation of them, important for the city's memory and identity, will be closely linked to the planning of these activities. Also, it is related to policies and the solidarity of the people. The participation and support of the community are critical for the historical and ecological values' conservation.

• A fundamental inter-relationship pertinent to spatial- cultural dynamics that has been noticed in many cities is that between the university and the city. The relationship between universities and cities has become increasingly important in the recent decade.[14] There are 61 universities and 1.001.834 students in Istanbul.[15] This causes a 25.000 housing unit need per year in Istanbul.[16] So, students are and will be influential in the urban population and housing debates. Like in Nişantepe, university have effects on increasing housing and commercial investments in their surroundings.
• New settlements located on the periphery have been supported by transportation investments and the city has grown uncontrollably. This expansion has sometimes caused urbanization by displacing the rural population and sometimes caused the transformation of the region's socio-economic situation by building more luxurious houses instead of existing ones. All of these indicate social risks such as spatial injustice, social segregation, and insecurity in the future.
• These processes also underline ecological risks. Urban transformation is based on rent having both social and environmental dangers. Opening green areas, forests, and agricultural lands to construction will bring many dangers: resource insufficiency, pollution, deforestation, scarcity of natural resources, injustice to access natural resources, and unhealthiness.

CONCLUSION

Istanbul is a dynamic metropolis that is constantly transforming, influenced by social, cultural, and political events. This study has comprehensively addressed the urban development dynamics of Istanbul and the various risks it may face in the future in the context of housing. In this article, the characteristics that inherent the genetics of the city, specific to Istanbul, have been examined in the context of housing, and this examination has provided a basis for imagining the future. In this context, to discuss the future of Istanbul in the context of housing, transportation, population, earthquake, urban transformation, history, and ecology/sustainability issues come to the forefront. Accordingly, it has been determined that climate crisis, injustice, earthquake, transformation, segregation and security issues; increasing commercial activities, city branding, housing needs, social segregation, spatial injustice, and scarcity of natural resources may be on the agenda. For Istanbul to develop in a balanced and sustainable manner, to be resilient and livable, transportation and housing investments must be planned holistically, urban transformation projects must be carried out in accordance with the principles of social justice and environmental sustainability.

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VACANCY, A GOLDEN OPPORTUNITY FOR BRUSSELS

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INTRODUCTION

Vacancy, a socio-cultural and economic challenge?

Vacant buildings are not a new challenge. They are a normal phenomenon inherent to the dynamics of the real estate sector.[1] However, due to urban disinvestment, neglect and social segregation processes, [2] vacant buildings can create a real threat. Vacancy becomes then a social and security problem, leading to economic damage.[3] Furthermore, the valuable energy, scarce materials and collected budget once invested in these buildings are completely unutilized.

Research from the Brussels actors, incl. the non-profit organization Toestand, active in the temporary reactivation of vacant properties, revealed in 2018 that around 6.5 million square meters are vacant in the Brussels Capital Region. This estimated total includes all building types, including houses, offices, and commercial and industrial buildings. [4] Similar research suggests that comparable amounts of vacant buildings can be found in other countries, especially in the global North. [5]

Sterkens, Coppens and Van Acker mention five types of vacancy: friction, structural, periodical, temporary and hidden vacancy. While friction vacancy is inherent for the proper functioning of the real estate market, periodical and hidden vacancies are concealed behind buildings' occasional use. For example, schools are vacated after they close and during the weekend while secondary residences may be vacant during longer periods. Structural and temporary vacancy is where the challenges mentioned above are most often observed; after all, in the latter two types, the building's vacancy persists for a longer time than necessary for a new function or occupation to start.[6]

In Brussels, a building is officially considered vacant by the government when it has been vacant for more than 50% in the last 12 months. After the identification by the municipality, the owner receives a warning and has three months to either prove that the dwelling is occupied or to justify the vacancy. If the municipality receives no answer, an administrative fine may be imposed. The fine is the result of the number of empty floors and running meters of façade times 500 euros. [7] The Brussels's board disclosed that 13.5 million euros was collected in 2021. In total 324 buildings and 413 locations were determined vacant or abandoned and fined.[8]

In addition to the various forms of vacancy, its multiple causes make vacancy a complex phenomenon. Analyses show that it can arise from an inappropriate offer of the real estate market, due to a shift in demand, speculation, or even from insecurities in policy and planning. [9] In addition, a part of today's vacant buildings is due to urban transformation projects, where existing buildings are (planned to be) demolished to make place for new buildings or are renovated and transformed. [10] Consequently, existing buildings and sites within certain urban locations are left with no new occupation, leaving them vacant for varying periods.

Reactivation

Possible solutions to prevent long-term vacancy of buildings can be found in their permanent reconversion or their preliminary reactivation awaiting such transformation through temporary use. Both manners can reactivate buildings and prevent structural vacancy. Unfortunately, the latter does not happen regularly yet.

Temporary use can quickly reactivate unused buildings, preventing vacancies' negative effects, showcasing space potential, and addressing local and societal needs.[11] It applies to all property types. Recently, in Brussels, a boom of temporary use projects has been observed, e.g. Reset in a former office building, la Mercerie and Studio Citygate in former industrial buildings, Lioncity in a former commercial building, Mona in a monastery and even Molenwest Square and Park Quest on vacant land.

Long-term reconversion is also a possibility. Over the years numerous buildings have been reconverted. In the Brussels Capital Region, 20% of all new housing production between 2018-2020 was a result of reconverting offices to houses. Furthermore, office buildings have a multifunctional lay-out which allows reconversion to other functions as well such as commercial space, accommodations, ambassies, etc.[12]

Vacancy does thus not have to lead to demolition but can be seen as a new starting point.

RESEARCH GOAL AND METHOD

The primary goal of our research is to enhance the economic and social welfare of urban areas by developing a deeper understanding of building vacancies and formulating effective strategies for their activation. Therefore, we aim to bridge the gap between the current policy constraints—where actions are only taken after a building has been vacant for over a year—and the need for more proactive and impactful measures.

Our methodological approach involves a first **historical analysis** of the various actions taken to address building vacancies in Brussels over the last 25 years. This retrospective study allows us to:

- **Map the evolution** of vacancy-related policies and interventions.
- **Identify persistent challenges** that hinder the activation of vacant buildings.
- **Highlight potential opportunities** for governmental focus that could expedite the reintegration of vacant properties into the urban fabric.

Most identified actions and events were mapped using the website of Bruzz – vzw Vlaams-Brusselse Media. They collect news, culture, and stories all over Brussels.[13] Information on temporary use projects and reconversion results from our library of projects that we had previously established and information found in different publications of perspective.brussels.[14]

By analyzing the interactions between university, industry, government and public, we seek to uncover patterns and insights that can inform future urban planning and policymaking and offer actionable strategies for city governments to revitalize unused spaces more effectively, thereby fostering inclusive and vibrant communities.

The found practices will be discussed and compared with each other by making use of the iceberg and leverage model inspired by Danielle Davelaar (2021) and Donella Meadows (2008). This model allows to rank observed practices based on their potential for systemic changes.[15]

SYNTHESISED OVERVIEW OF CURRENT ACTIONS TAKEN

Vacancy research in Europe

The paper "Urban vacancy in Europe: A synthetic review and research agenda" provides insights into the latest developments in research on vacancy. It describes the topic as a niche research area that has gained interest in different disciplines and research communities who focus on different dimensions of

vacancy. However, this research describes limited communication between these groups which leads to parallel debates and different vocabulary. As our cities are all facing economic, ecological and societal crises, vacancy is increasing as a symptom of these crises but is also a possible playground for experimentation.[16]

Mapping of vacancy in Brussels

For vacancy taxes to be effective, governmental institutions require a detailed overview of all vacant properties. Unfortunately, the list remains incomplete. The Brussels' local planning department perspective.brussels maps both vacancies of offices and industrial properties in Brussels. Unfortunately, they can currently only map the buildings in use, reconverted and commercially vacant buildings. The real vacancy might thus be higher than the expected one. The commercial vacancy totaled 958.870 m² for office buildings in 2023 and 169.395 m² for industrial buildings in 2017. [17]
Furthermore, numerous offices and industrial buildings have been reconverted over the years. Between 2021 and 2022, 298.403 m² of offices have been reconverted. [18] The main office stock of the Brussels Capital region is concentrated in the city center while the industrial buildings center around the canal.[19]

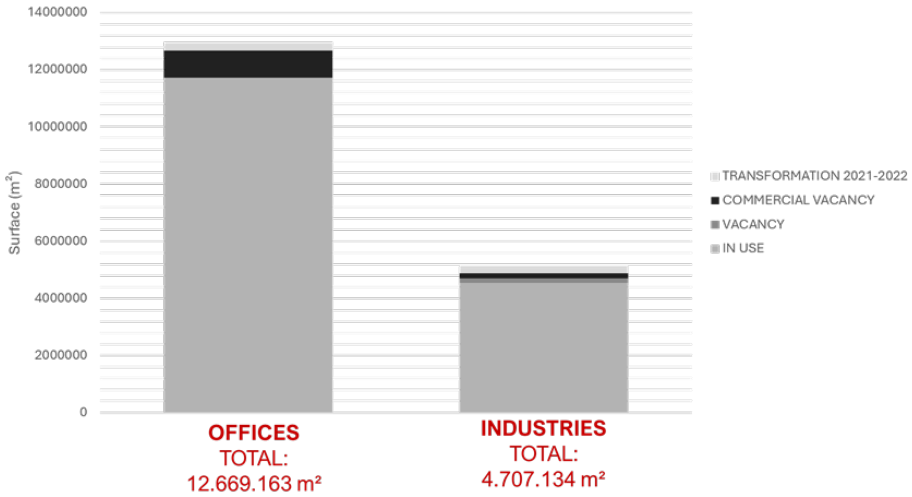

Figure 1. In use and vacant office and industry buildings in Brussels (based on numbers by perspective.brussels and Toestand)

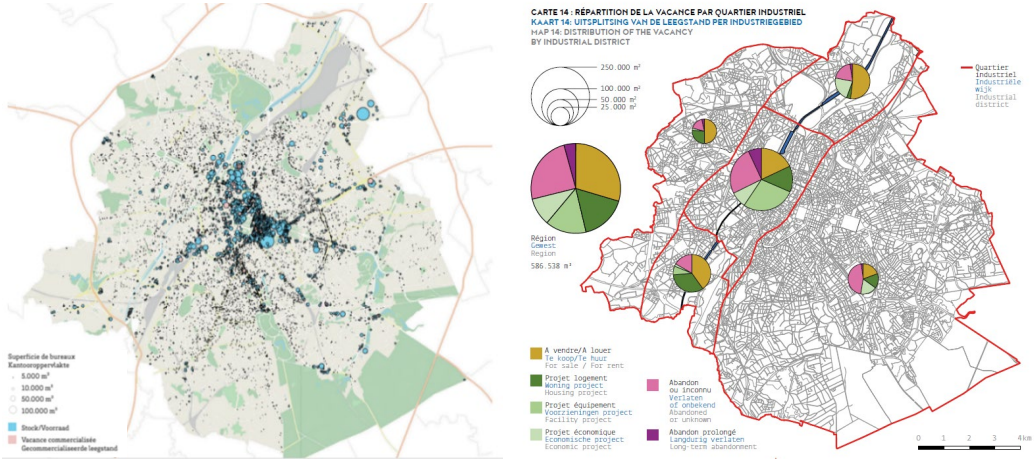

Figure 2. Left: Office stock in Brussels (perspective.brussels, 2024); Right: Vacancy of industrial buildings in Brussels (perspective.brussels, 2017)

In 2016, a database was developed by the government in collaboration with academia to detect vacant buildings. Based on water and electricity use, a check of the population registers and field survey, vacancy of housing is monitored. All this data is centralized and mapped in a web-based GIS database.[20]

Furthermore, there are also numerous bottom-up initiatives to raise the issue of vacancy. The project Saint-Vide Leegbeek is supported by different non-profit organizations fighting for the right to the city and to live in qualitative and affordable housing. Their starting point is that Brussels should benefit the whole community and not just a few individuals and their interests.

The non-profits involved are Communa, Toestand, Fébul, Woningen 123 Logements, BRAL and SAW-B. Together they are looking for immediate solutions for housing by the temporary occupation of vacant buildings which allows them to react in a shorter period. They are also looking into different initiatives that help answer the climate, mobility, energy, and other crises in the city. Through collective appropriation, the imagined municipality wants citizens to participate in shaping the city.[21]

MAPPING OF ACTIONS TO ELIMINATE VACANCY IN BRUSSELS: A TIMELLINE

Structure timeline

Actions taken to map and diminish vacancies in Brussels were gathered. The most important key actions are shown in our timeline. Beyond mapping the actions taken chronologically, we also look at the impact these actions have had by using the iceberg and leverage model. As a result, we rank actions according to their potential for systematic change. Here, the actions with the highest potential are at the bottom of the iceberg.

The first order describes reactive practices. These contain the most conventional measures to tackle the problem. They may lead to a positive impact in the short term but don’t change society.

Anticipating practices interact with current trends. They will have an impact on the middle-long term. They adapt the system to make it more robust.

Design practices interfere with the standard practices of our society. They create new links and collaborations and adapt or introduce roles. These practices form a leverage arm to a new sustainable society.

Lastly, transformational actions question the purposes and the vision of our society on what to do with vacant properties. They lead to the formation of new norms and values and update our goal. These practices are the hardest to achieve but will ensure lasting sustainability.

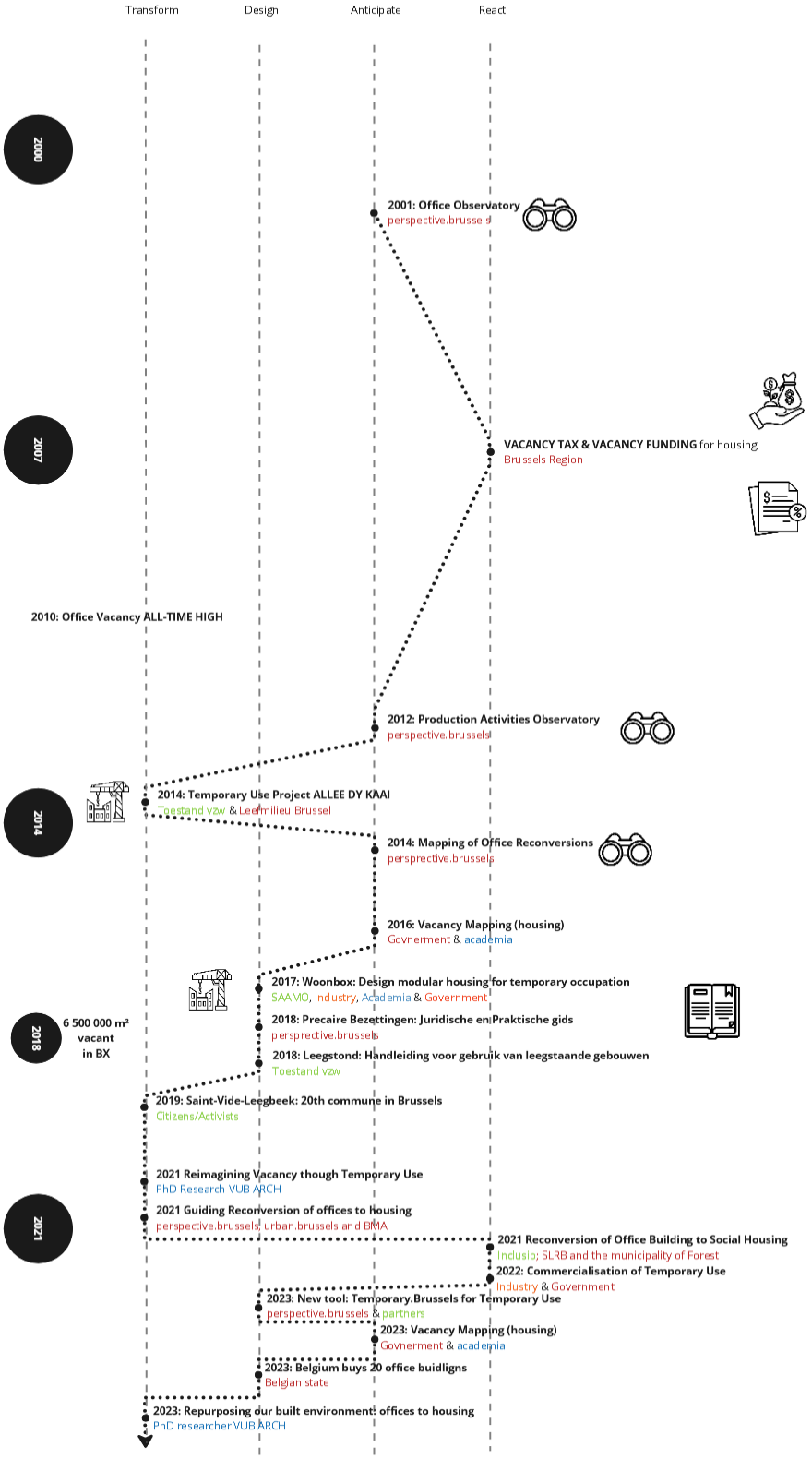

Figure 3. Timeline: actions against vacancy

Key actions against vacancy

Figure 3 illustrates the key actions taken to address vacancy in Brussels. The timeline starts mapping these actions from the 2000's onwards.

2001: The 13th edition of the Office Observatory by perspective.brussels was published, covering the office park in Brussels from 1997-1999 and commercial vacancy. This is the earliest edition still accessible on their site. After this period, vacancy rates increased.[22] Unfortunately, their exact data or project list is not shared.

2007: Introduction of a vacancy fund alongside the elimination of loopholes in vacancy taxes. However, two years later, the fund remained unused. Additionally, the implementation of these taxes necessitated significant resource investment from municipalities to identify vacant properties and issue warnings. Consequently, the initial demand for vacancy taxes was limited.[23]

2012: First publication on Brussels' Productive Activities by perspective.brussels.[24]

2014: Start of the first large scale temporary use project "Alle Du Kaai" by Leefmilieu Brussel and Toestand.[25]

This started as a temporary project where Toestand was chosen as the temporary project manager. The goal was to test out various sport activities on the site that could later be implemented in the future park. The project lasted 8 years. The organisers tried to slow down the gentrification process happening in the canal area by actively focussing and offering spaces for a part of the society that usually has a difficult time of finding space in the city.

Figure 4. Start large scale temporary use project: Alle Du Kaai; (canal.brussels, 2014)

2014: First publication of the office observatory that discusses reconversion of offices

Reconversion has always happened but for the first time, the office observatory started recording them. [26]

2017: Woonbox is a temporary occupation project of industrial buildings for housing. Wooden modular housing units were designed and installed in a vacant building in Sint-Jans-Molenbeek.[27]

Figure 5. WoonBox@Cinoco; SAAMO, 2020

2018: 6.500.000 m² of buildings vacant = size of the municipality of lxelles[28]
2018: Publications on the realization of temporary use projects + bottom-up pressure
Both the public agency perspective.brussels and the non-profit Toestand published a manual on how to organise temporary use projects.[29] However, the manual of Toestand was more detailed than merely a list of legal and administrative considerations. It really is a step-by-step guide with practical insights. Unfortunately, interviewees, part of the civil society, elaborated that this guide brought aspects to light where many private developers took advantage of for commercial profit and gentrification.
Further multiple organisations have united to develop the manifesto against Brussels' vacancy. In addition, they created a fictional 20th municipality of Brussels called St Vide-Leegbeek, to illustrate the vast size and challenge created by the Brussels' vacant buildings. With this, these organisations want to work together with politicians to revitalize vacant buildings for social purposes. [30]

Figure 6. Publication and bottom-up pressure; (©perspective.brussels, Toestand and St-Vide-Leegbeek)

2021: First reconversion of office buildings to social housing.[31]
2021: Guiding reconversion of offices in Brussels
Together with urban.brussels and the Maitre Architecte de Bruxelles (Brussels Buillding master), perspective.brussels was appointed to the Task Force Bureau by the Brussels government. They organised multiple workshops to study the potential of office reconversion to housing or public infrastructure such as schools.[32]
2023: New tool, Temporary.Brussels for Temporary use.

Recently, a new tool for temporary use has been made available. The tool was again made without any collaboration with public actors, but it is still too early to determine the effects that the tool will have on vacancy in practice.[33]

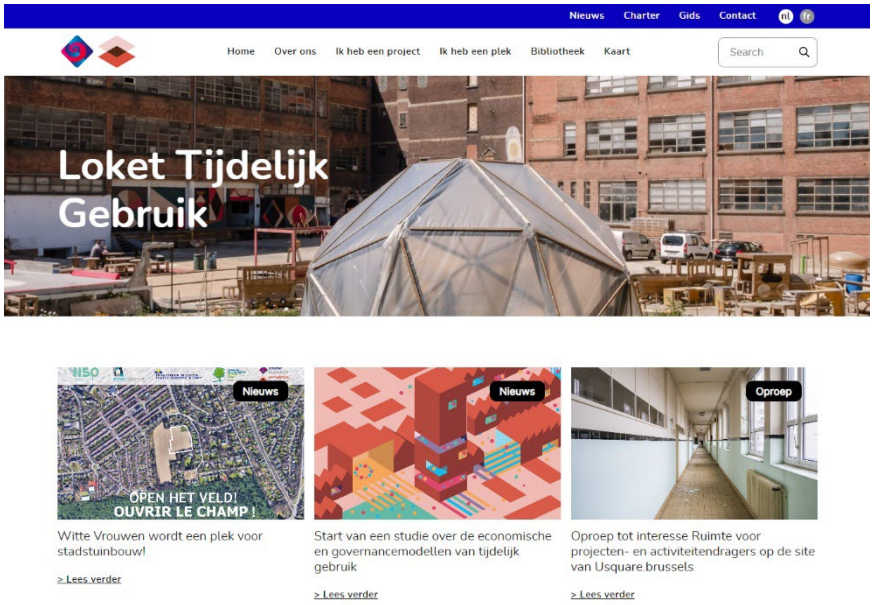

Figure 7. Interface new tool for temporary use; temporary.brussels, n.d.

Action	University	Government/ Governmental institution	Industry	Public
Office observatory		X		
Vacancy funds and taxes		X		
Production activity observatory		X		
Temporary use project: Alle Du Kaai		X		X
Mapping of office reconversion		X		
Woonbox	X	X	X	X
Precaire bezettingen: juridische en praktische gids	X	X		
Leegstond: Handleiding voor gebruik van leegstaande gebouwen				X
St-Vide-Leegbeek				X
Guiding office reconversion	X	X	X	X
Reconversion of offices to social housing	X	X	X	X
New tool: Temporary use	X	X		

Table 1. Actions against vacancy: actors involved

Action	React	Anticipate	Design	Transform
Office observatory		X		
Vacancy funds and taxes	X			
Production activity observatory		X		
Temporary use project: Alle Du Kaai				X
Mapping of office reconversion		X		
Precaire bezettingen: juridische en praktische gids			X	
Leegstond: Handleiding voor gebruik van leegstaande gebouwen			X	
St-Vide-Leegbeek				X
Reconversion of offices to social housing	X			
Guiding office reconversion				X
New tool: Temporary use			X	

Table 2. Actions against vacancy: Type of actions according to the iceberg and leverage model by Danielle Davelaar (2021) and Donella Meadows (2008)

CRITICAL REFLECTION ON THE CURRENT PRACTICE

Our study on the practices of Brussels reveals several barriers that persist despite regulatory changes in the past decades.

Types of actions applied throughout the years

As can be seen, the government and its institutions focused on anticipating and reactive actions by observing the vacancy rate and mapping different trends, taxing owners of vacant buildings or supporting municipalities to renovate these buildings. These actions did not always lead to the desired result. For example, the funding to promote the renovation of vacant buildings to activate them again remained unused in 2009. Municipalities, Public Centers for Social Welfare (OCMW) and the social housing sector could turn these funds towards renovation of vacant dwellings but none of them have called upon these funds. If such a fund exists, why not call upon it?

As Van Heur mentioned in his paper, only in the past decade, we see the focus change to design and transformative actions, mainly executed by civil society. For example, the temporary occupation project Alle Du Kaai by Toestand in collaboration with Leefmilieu.brussels. The government started to support temporary occupation by developing multiple tools such as the guide “Precaire bezettingen” in 2018. Unfortunately, this guide proved difficult to use. The guide created by Toestand was much clearer and easy to apply. However, interviewees expressed their concerns regarding the implementation of the guide as they imagine that the industry uses it to make a profit.

Barriers to overcome

One major barrier is the lack of communication and collaboration between the government, its institutions, and other influential actors such as academia, industry and civil society. As can be seen in Table 1, which depicts the different actions taken over the last 25 years, every group of stakeholders still acted in their discipline. As such, most of these actions are regulated by the government or its institutions alone. Better collaboration and a transdisciplinary approach could be an opportunity to ensure that the tools, funding, and regulations can be used effectively.

Another example where transdisciplinary collaboration could have been fruitful was in the newly developed tool intended for temporary use (2023). This tool was introduced by two Brussels governmental institutions, the local planning department and the regional development company, and was developed in collaboration partly with academia. However, the development lacked substantial collaboration with practitioners of temporary use, such as civil society (e.g. non-profit organizations). The latter expressed their concerns regarding the ambition of this tool.[34] The efficacy and potential remain to be seen, as it is yet to be determined whether it will benefit not only private developers but also the local community and civil society.

Building owners might resist transforming their properties, preferring to keep them vacant or use them as storage, waiting for better opportunities. They may fear damage or that temporary occupants won't leave. The latter was expressed by private developers as a main reason why not to do it. However, by illustrating the opportunities, and offering guidance and effective tools, owners, industry and private developers, can be encouraged.

Transforming vacant buildings by private developers frequently results in neighborhood gentrification. Collaboration with governmental institutions and civil society ensures diverse voices are represented. Local planning departments should support developers and set specific criteria for projects that benefit society.

Another challenge is the lack of a specific legal framework for transforming vacant buildings. Temporary projects must undergo the same lengthy permit process as long-term ones, which is impractical for limited-time projects. Exceptions in these lengthy procedures were noticed when a governmental actor supported a project while private developers struggle.

Opportunities can thus be found in further expanding the collaboration between the government, academia and civil society and the legal framework to support the transformation of buildings, either through short-term temporary projects, or long-term reconversion projects.

ACKNOWLEDGEMENTS

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URBAN ART INSTALLATIONS AS A TOOL FOR PLACEMAKING

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INTRODUCTION

Most of our cities still need better public places; placemaking for years has been an important subject of numerous articles and conferences.[1] Urban art installations can be powerful tools for improving placemaking, but there are limited studies that examine both their impact on social dynamics in public spaces or describe the design characteristics that could enhance their effectiveness. This paper explores the impact of urban art installations from a design perspective. It introduces a simple model that allows for the description of urban art installations from various viewpoints, and examines two case studies. The insights gathered are summarized to systematize the body of knowledge and assist designers and urban planners in their work.

Urban design: aesthetic qualities and social usage

In the discipline of design there is a historic discourse between form and function, and striking the right balance between the two. A similar discussion is present in the area of urban design (design involving shaping cities' physical forms and public spaces).[2] Authors distinguish two main traditions of urban design thought: the 'visual-artistic' tradition, emphasizing the aesthetic qualities of buildings and spaces, and the 'social usage' tradition, focusing on the social aspects of urban places.[3] In recent years, these directions have merged into the 'making places' tradition, which balances aesthetics with social functionality to create appealing and engaging urban environments that enhance city livability.[4]

Placemaking

According to Jacobs, placemaking is an intentional urban design approach that emphasizes community and social aspects.[5] It aims to revitalize public spaces into lively, culturally rich environments that promote interactions, strengthen community bonds, and foster belonging. By hosting diverse activities, placemaking connects people from various backgrounds and highlights the place's unique identity. This view is echoed by UN-Habitat and the Project for Public Spaces, which stress aspects like well-being, social connections, inclusivity, and place identity.[6]

Urban art installations

Urban art installations are a new form of spatial design (arranging physical spaces for functionality and aesthetics), balancing on the border between art, architecture, and design.[7] Through their diversity and rich variety in complexity, materials and forms they can bring “multiple experiences to urban

public spaces", and encourage an active involvement.[8] From their nature, they focus on the individual human experience which in a sense complements the physical works. This research focuses on solid urban art installations that do not incorporate media or electronics and are functional, meaning they are intended for unrestricted use by the public.

METHODOLOGY

To assess the effectiveness of urban art installations for placemaking, I conducted a review of literature and practice, analyzing academic sources and real-world examples. The literature review identified the impact of various urban design aspects on users, leading to the creation of a four-layered methodological framework: visual, functional, social, and contextual. The visual layer examines aesthetics, the functional layer considers offered functionality, the social layer explores potential for social interactions, and the contextual layer assesses the influence of the surrounding environment. The main analysis focuses on two case studies selected for the unique characteristics of the installations described. Both feature solid forms with extended functionality that blend art, design, and architecture, and their detailed documentation allowed for an in-depth analysis. By comparing these cases and juxtaposing them with other research, I identified design characteristics that are potentially crucial for enhancing the effectiveness of urban art installations in placemaking.

EFFICIENCY FOR PLACEMAKING - MODEL

Existing research shows that urban art installations positively impact placemaking by encouraging people to spend more time, engage in various activities, and foster a livelier, more sociable atmosphere.[9] To gain a deeper understanding of these contributions, I chose to describe urban art installations from three distinct perspectives—visual, functional, and social—each operating within a specific context. This distinction is inspired by two main traditions in urban design thought: the 'visual-artistic' tradition and the 'social usage' tradition, as mentioned earlier. The visual aspect is significant for both users and decision-makers, partly because of its resemblance to public art. The 'social usage' aspect is divided into two levels: the 'functional' level, which involves individual affordances (action possibilities - e.g., sitting, climbing), and the 'social interaction' level, which concerns interactions between users inspired by or occurring around the installations. This distinction draws on the research of A. Afonso, who analyzed urban art installations on three scales: micro (whole-body interactions), meso (social interactions), and macro (context).[10] However, I chose not to depict social interactions merely as a sum of individual, recognizing that they are also influenced by other characteristics, for example aesthetics. The three aspects—visual, functional, and social—are influenced by the urban context and are interconnected, requiring a delicate balance.

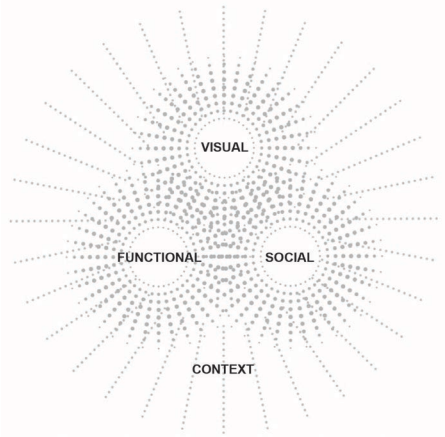

Figure 1. Model of visual aesthetics, social interaction, and functionality rooted in context.

Artistic-visual presence

Urban art installations often have a strong artistic presence, similar to traditional sculptures or public artworks, and are described as such by the authors or marketeers. From the placemaking perspective aesthetically appealing installations can attract visitors from different neighborhoods or cities, spark curiosity, gather spectators around and help revitalize spaces. Locally, beloved distinctive artifacts can enhance place attachment and foster a sense of belonging and identity, especially when their aesthetics are developed through a citizen-centered process.[11] The visual appearance can affect how adults categorize outdoor furnishings and apply social norms, influencing their engagement in physical exploration or social interaction. Children, however, might prioritize diverse, stimulating affordances over aesthetics.[12]

Functionality

Urban art installations offer a broader functionality as compared with traditional urban designs such as benches. Unlike these conventional designs, which typically target one user group and serve one specific function, urban art installations can serve multiple user groups and incorporate various functions or affordances (action possibilities) simultaneously. A study by A. Afonso found that installations which stimulated play and dynamic behavior for different actors created a more vibrant, pleasant, and energetic atmosphere.[13] A broad range of possible interactions which the installations offered and inspired attracted people to stay longer in the area.[14] Participation varied in form and intensity, ranging from observation (looking, photographing), through active participation (sitting, chatting) to active exploration (physical play).[15] Similarly, a Swiss study noted that urban art installations supported diverse object-specific behaviors.[16]

Social interactions

In placemaking, the social dimension is particularly crucial, as the goal is to create spaces that strengthen community bonds and foster a sense of belonging.[17] Urban art installations have demonstrated their ability to inspire a wide range of social interactions and can serve as venues for various events. They have the potential to integrate diverse user groups, including ethnic minorities or different age groups, aligning with contemporary architectural concepts that promote inclusion by bringing together different communities.[18] This approach reflects a recent trend in public space design that favors the blending of different uses, in contrast to the previously prevalent practice of segregating specific user groups, such as in fenced playgrounds intended exclusively for children.

Context

No matter how well urban art installations are designed and executed, they are not isolated works; they must be well-integrated into their context to be effective. They should be placed in areas with moderate pedestrian flows to ensure visibility without causing obstructions in space if the pedestrian flow is too high.[19] Places that are well integrated with their neighborhood street networks have more chances to foster community, stimulate social contact and attract pedestrians.[20] The quality and variety of land uses, including green spaces and urban amenities, are also key in attracting people to the sites.[21] Additionally, the visual aesthetics should harmonize with the surrounding.[22]

CASE STUDY

To understand the characteristics of urban art installations from a placemaking perspective, I analyzed two installations using the described model, based on existing site observations conducted by other researchers.

Modified Social Benches

The urban art installation *Modified Social Benches* by Danish artist Jeppe Hein, located in Southbank, London, has been extensively analyzed in André Afonso's PhD thesis.[23] All observations described below are based on his study.

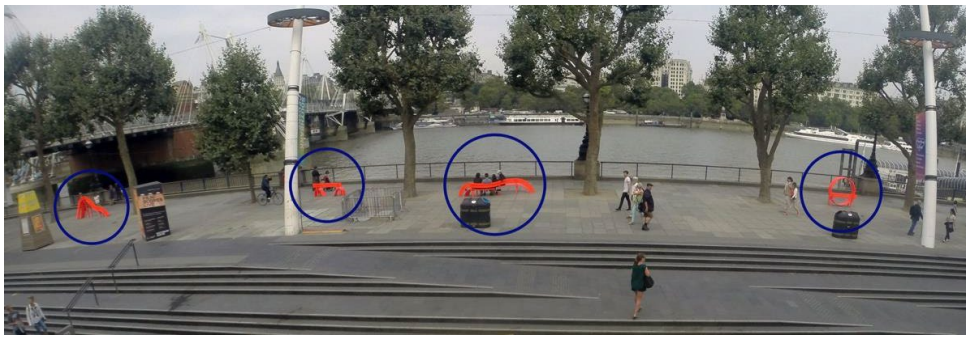

Figure 2. Modified Social Benches. Source: Afonso, Flowing Bodies (PhD diss., Bartlett School of Architecture, UCL, 2021).

Artistic-visual presence

The observed installation consisted of four different benches. Each object offered a unique and imaginative twist on the traditional urban bench whose archetypical shapes have been intentionally deformed and modified. The unconventional, sculptural design as well as vibrant colors attracted visitors and created an initial element of surprise, challenging spatial dynamics in typical urban environments and prompting people to reconsider their interactions with public space. Responses varied from brief glances to extended use, such as chatting or climbing. Even though the initial surprise has only lasted a short moment, many players demonstrated own engagement and emotions which triggered enthusiastic interactions.

Functionality

The installations effectively engaged people. The four benches offered varied bodily and social opportunities: some designs promoted playful and exploratory full-body interactions, while others invited for relaxation and socializing. In order to better understand people's engagement, the users have been categorized either as spectators, participants, and players, depending on the intensity of their involvement. Spectators in this study have been defined as people within about four meters of a bench who are either visibly focused on the bench, or formed part of a group where at least one member interacts with the bench. Participants typically used installations as convenient urban furniture for sitting, waiting, or enjoying views. The players actively explored the sculptures with their body and engaged in active exploration, ex. climbing or hanging. Their playful behavior was driven by two primary factors: personal curiosity to explore and experiment or the desire to pose for (often funny) photographs or videos. Overall, by stimulating play and dynamic behaviors installations created a vibrant, pleasant, and energetic atmosphere.

Social interactions

In addition to physical interactions, the installations engaged people in brief, casual encounters. The researcher described the social interactions as a consequence of the individual bodily interactions which evolved into collective, performative actions. Each group of users – spectators, participants, and players – contributed in a different way to the generation of a social situation. Spectators by

observing the benches encouraged passers-by to do the same. Some passers-by would pause to watch or photograph the benches, and a portion of them would then become players themselves. Spontaneous group activities encouraged more people to engage. This led to a lively and friendly atmosphere, forming a temporary community that activated the urban space and fostered a sense of safety and mutual trust. However, as compared against other installations studied by the researcher, the Modified Urban Benches registered lower levels of social integration of people from different groups and backgrounds. This discrepancy was ascribed to the context, so macro-scale factors, described below.

Context

The four Modified Social Benches described were located along a 50-meter stretch of the Festival Riverside, part of the Queen's Walk, a popular riverside walkway in central LondonIn this urban setting, which is already conducive to social activities and various shared encounters, the observations revealed that the installation itself did not significantly attract people to Festival Riverside, as many existing urban design elements already fulfilled diverse needs in the public space. Additionally, the area where the installations were placed was marked by socio-spatial segregation driven by economic pressures and disparities, with no specific institutional efforts made to counterbalance this. Most likely this is why the installation registered lower levels of social integration of people from different ethnic groups than other installations forming part of the same study.

moveART sculptures in Arosa and in Donach

The second case study examines the moveART play sculptures, which were analyzed by Dr. Theresia Leuenberger and Livia Suter in Switzerland in 2021.[24] All observations described below are based on this study. The name moveART refers both to the brand and the collection of modular, multi-functional public space objects with a distinctive wave-like appearance.

Figure 3. Arosa Wave Observation Object. Source: Leuenberger and Suter, Social Impact of moveART Playscultures® (Olten: FHNW APS, 2021).

Artistic-visual presence

The sculptures, created through a parametric design process, originate from a single form—the double helix, which is the structure of DNA strands in all living organisms. The use of computational techniques to create fluid forms results in a futuristic or biomorphic aesthetic that makes a strong visual impact on the surrounding space. The use of wood as the main material contributes to a smooth, harmonizing and universally appealing look. Various moveART elements create urban art installations which provide multiple functions for adults and children in a single location without compromising the aesthetic integrity of the project.

Functionality

The moveART sculptures are designed to enliven and harmonize living spaces by combining aesthetics, function, and safety, including playground safety certification for chosen elements. Their shapes do not dictate specific functions, allowing for various activities. These activities have been observed and classified using moveART's Human Ignition Profile, which maps users' needs and measures how well each sculpture supports key activities, expressed as a percentage. For instance, the Arosa Wave sculpture (Figure 3) has been successful across nearly all categories (Figure 4). The tallest waves encouraged climbing, sliding, sitting, and lying, while the saddle areas were used for esting, sitting, eating, taking photos. The edges were used for balancing, sitting, pulling up, or eating. The report does not specify which age groups engaged in these behaviors. The sculpture's novelty often sparked creativity in first-time users (as seen in Arosa), while regular use (e.g., at the Dornach daycare) led to more creative interactions and expanded activities, suggesting that extended use fosters creativity.

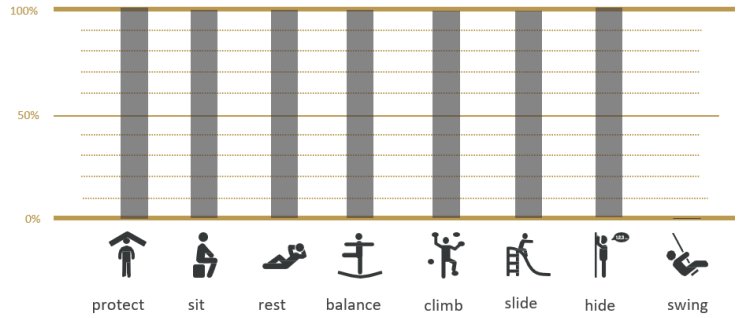

Figure 4. Human Ignition Profile for Arosa Wave observation object. Source: Leuenberger and Suter, Social Impact of moveART Playscultures® (Olten: FHNW APS, 2021).

Social interactions

Researchers reported that moveART sculptures encouraged diverse engagement in urban spaces and showed potential for integrating various user groups. Photo documentation from Arona reveals adults sitting and chatting on the sculptures. Observations of a moveART sculpture in a Dornach kindergarten showed its significant role in group play. The sculpture's abstract design encouraged children to use their imagination, such as pretending the floor was 'lava' due to its fluid form or using it as a 'tent' for shelter. The sculpture's size and shape promoted conflict-free use, allowing children to slide or climb in different spots without needing to wait. The report suggests that the sculptures' integrative nature facilitates intercultural communication through shared play among people from different backgrounds.

Context

The authors of the report emphasized the importance of selecting suitable locations and appropriately matching user groups to the specific context. They noted that the local context—such as the placement of sculptures and the presence of other community projects—plays a crucial role in naturally integrating the sculptures into the environment. Given the flexibility of moveART sculpture designs, the proposed design process involves analyzing the context, including user movement patterns, and translating this analysis into functional design. This approach ensures the accommodation and integration of diverse local needs while aligning with ongoing planning efforts.

CONCLUSIONS

Despite being conducted in different countries with varying research objectives, the two studies presented share many similarities. Both demonstrate that urban art installations can serve as effective tools for placemaking, creating spaces that stimulate community life across generations. This aligns with concepts of humane spaces between buildings, a notion dating back to the 1950s.[25] The studies demonstrate that similarly to playgrounds, urban art installations can also function as urban meeting places.[26]

In both cases, abstract and open-ended shapes, without predetermined functions, provided more diverse opportunities for interaction and social engagement than conventional furniture. This suggests that an interaction-focused approach to urban art installations is effective and can open up new avenues for research and design. Ross and Wensveen's work on the aesthetics of interaction further explores how design can elicit meaningful and engaging experiences through user interactions.[27] Their concept of introducing a 'new language of form that incorporates the dynamics of behavior' seems to be also relevant to urban art installations, even the static ones.[28] The case studies revealed that physical form significantly influenced how people used the objects. While the aesthetic consistency remained within each series of objects, the varying forms led to different usage patterns. This observation aligns with Bekker, Sturm, and Eggen's research, which asserts that 'object characteristics may influence the way players interact and thus affect social interaction.'[29] Further exploration of urban art installations through the lens of interaction design and aesthetics of interaction seems particularly promising. We could potentially benefit from applying existing research in this field to understand and enhance the design and impact of urban art installations.

The urban art installations described offered users the freedom to engage with the objects in multiple ways, incorporating elements of play and spontaneity that made them appealing to people of different generations and backgrounds. These findings resonate with Tilde Bekker's research on games and play, which suggests that 'linking play characteristics to interaction design provides users with greater freedom and potentially more pleasure and satisfaction, keeping them interested and motivated for longer.'[30] Further exploration into research on games and play could yield deeper insights into how these dynamics can be better understood and enhanced. Given the success of stimulating playful behaviors in both adults and children for urban art installations, such an analysis appears highly relevant to the role of urban art installations in placemaking.

The model presented focused on three dimensions: visual, functional, and social, all deeply rooted in the urban context. By integrating insights from these different perspectives, we can better categorize and understand the impact of urban art installations on placemaking.

DISCUSSION

This study referenced two independent case studies, which may not represent broader trends. Findings from these specific cases may not be easily generalizable to other contexts, especially those that differ significantly, due to the unique characteristics of each location and installation. Additionally, user behaviors are influenced by various factors—such as age, social status, and background—making it challenging to identify consistent patterns. Reliance on existing documentation and the subjective interpretation of researchers can introduce biases. To address these complexities, further research is needed to explore how different user groups approach diverse public spaces and perceive urban art installations, aiming for a more nuanced and comprehensive understanding.

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EXPLORING THE SCOPE OF WAYFINDING SYSTEM DESIGN IN URBAN ENVIRONMENTS AND ITS REPRESENTATION OF URBAN CULTURE

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INTRODUCTION

Wayfinding is a term coined by Lynch to refer to moving from a starting point through space to a destination.[1] A wayfinding system is the set of tools that support this process, including primarily graphic and written signage,[2] environmental graphic design,[3] maps[4] and information and communication design.[5] Wayfinding also plays a crucial role in shaping the image of a city.[6] Forming a city's image is a two-way process that includes the city's physical characteristics (such as buildings, streets, and landmarks) and people's perception and processing of these features.[7] Specifically, wayfinding involves two main foci: humans rely on external features (environmental clues) and internal representations (cognitive maps) to navigate space.[8] When the cognitive maps formed by individuals come together, an urban image is formed.

When constructing a wayfinding system, the choice of environmental cues is crucial. If a unique urban image is to be created, one that sets the city apart from others, the characteristics of the city need to be sought. Today, cities are increasingly using cultural activities to enhance their image.[9] Many cities in the UK have adopted cultural strategies and initiatives, often based on cultural infrastructure such as museums, theatres and concert halls.[10] These cultural facilities are concentrated in cultural districts, where cultural activities and a community of cultural facilities exist.[11] City cultural districts are essential components of the physical form of urban culture. People's interaction with and practices in cultural districts (such as cultural activities and festivals) also generate people's perception of urban culture. Therefore, the urban environment with cultural districts at its core becomes the context of this thesis. Based on this context, this paper aims to understand what information from the environment is used as a reference for wayfinding and to form perceptions of the city during the wayfinding process.

METHODOLOGY

This paper uses a case study as a research strategy and a walking interview to collect data. The case studies are used to investigate contemporary phenomena, and a representative or typical case should be selected.[12] Case studies allow for the selection of one object for in-depth study when the scope of the study includes many objects, so it is feasible to select one of the countless cities worldwide.

Therefore, the city centre of Manchester was selected. Contemporary Manchester is a city that has emerged from industrial decline and been reinvented based on cultural investment and creative

assets.[13] Cultural institutions and districts are significant in contemporary Manchester regarding the city's image and identity. According to BBC News,[14] Manchester is considered England's second most important city, second only to London. The influential cultural scene has enhanced Manchester's psychological importance in the eyes of the nation. Another reason is that London is tricky to visit, while Manchester is close to where I live, and I can visit it repeatedly. More importantly, Manchester's city centre has identifiable cultural districts within a 15-minute walk of each other (figure 1).

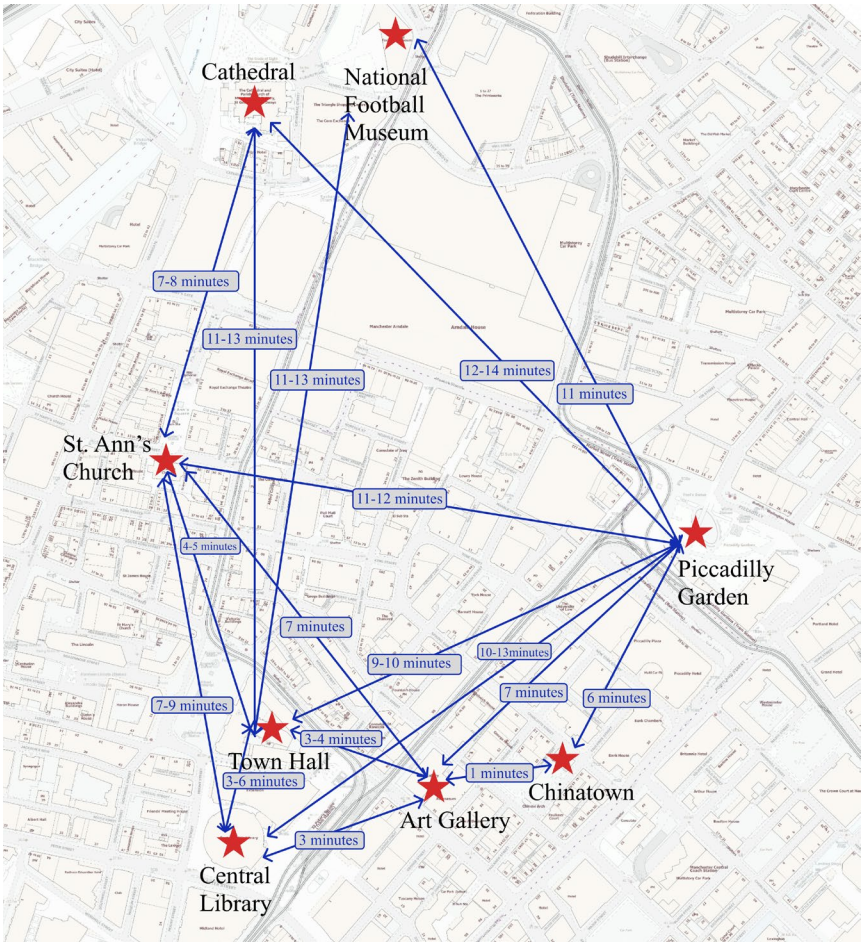

Figure 1. Walking times between Manchester city centre cultural districts. Basemap downloaded from Digimap (https://digimap.edina.ac.uk/os). Estimated times from Google Maps and verified by the author during multiple walks.

The walking interviews were used as a method to collect data. It is a unique research method used to study the connections between people and places and can generate more location-specific data.[15] The walking interview emphasises understanding the city as a dynamic environment where people, objects and information are constantly in motion.[16] Understanding the city as a dynamic system is crucial for studying wayfinding, as it is a process of constant change and adjustment in the city. The walking interview captures the mobility by allowing the researcher and participant to interact in the urban environment, which makes it an ideal tool for studying wayfinding. In addition, compared to a traditional interview, the walking interview provides an opportunity to walk around the city, which means that the researcher and participants are exposed to more multi-sensory stimuli from the environment.[17] Therefore, the walking interview provides a perspective for studying and observing participants' wayfinding behaviour.

Seventeen participants participated in 13 walking interviews, including one three-person, two two-person, and one one-on-one interview. The walking interviews were conducted in the city centre of Manchester. To understand the participants' wayfinding behaviour, the route was not predetermined. I only defined the purpose of the journey, including Piccadilly Garden, Chinatown, Art Gallery, Central Library, Town Hall, St. Ann's Church, Manchester Cathedral and the National Football Museum. Considering the limited duration of the study, 5–6 of these destinations was sought in each walking interview. The participants were asked not to use electronic navigation or GPS devices during the process but were given a paper map. They were interviewed about the landmarks they found, the references that helped with wayfinding, and the information and elements they found attractive or impressive. The participants also gave feedback on the streetscape and commented on the urban culture and local attractiveness. After the trip, they were invited to draw a map including the route, the landmarks passed, and any objects and streetscapes they remembered or were impressed.

INFORMATION IN URBAN ENVIRONMENT

Map

Maps are one of the most essential sources and play a decisive role. It is not that the more detailed the map, the more valuable it is. A map is successful if it quickly matches the presented information to reality. The effectiveness of a map is the result of choice, and the focus is on selecting the necessary information based on the map's goal.[18] The map the participants were given at the beginning was almost blank, but it was replaced to provide more information (Figure 2). When using the first map, participants focused more on the shapes of buildings and roads and their correspondence with the shapes on the map. However, when the second map was used, participants began to pay attention to the names of the streets because this information was marked on the map. Participants tended to seek out information, mainly the names of some buildings and places. For example, the shopping mall House of Fraser was considered a landmark, but the name of the building needed to be marked on the map.

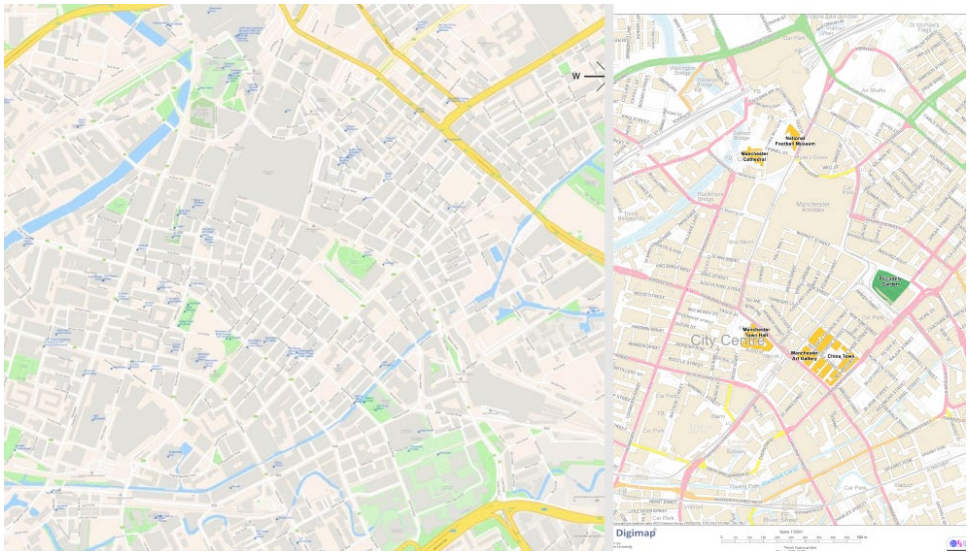

Figure 2. Two maps used in walking interviews. Basemap downloaded from Digimap (https://digimap.edina.ac.uk/os).

Architecture and Heritage

Architecture and heritage are two concepts that intersect. Heritage refers to things of historical or cultural value that can be preserved and passed on. It includes tangible objects such as relics, buildings, sites and landscapes, and intangible practices and traditions such as language, music and memory.[19] In this article, heritage refers to cultural heritage in the city, i.e. objects of cultural and historical value. The influence of architecture and heritage on wayfinding and people's perception of the city is reflected in three aspects: appearance, shape location and density.

Appearance includes the style and form of the architecture and heritage (e.g. modernist or classical architecture), the building materials (e.g., masonry, glass), the colours (overall tone or colour scheme), and distinctive features (e.g., tower tops, domes). The appearance of buildings is one of the critical factors determining whether they stand out from their surroundings and become a reference point for wayfinding. The size and height of a building are also essential factors. There is some consensus on the relationship between architectural style appearance and function, and prejudgments are formed in advance. During wayfinding, participants often search for and identify destinations based on these assumptions.

A typical example is Manchester Cathedral, where most participants emphasised that it is a very typical cathedral-style building that is easy to recognise in its environment. In addition to individual buildings, building groups also have an impact. For example, the building facades in Chinatown have consistent Chinese signage, creating a consistent impression.

Non-architectural heritage is often used as a reference entirely. In contrast, buildings can be used as references for their local features (such as facade decorations, tower tops, roofs, and columns) and in their entirety. Buildings occupy a prominent space in the city and appear large relative to the participants. As participants may approach from the front, side or back of a building, they will obtain different information. On Mosley Street, the art gallery is an essential landmark because its front is decorated with large columns, typical of an art gallery or museum. However, on Nicholas Street and George Street, people see the back and sides of the building, which lack distinctive features and, therefore, cannot be used as landmarks or references. The role of buildings and heritage is flexible, their prominence changes dynamically over time and space.

Shape refers primarily to the shape of a building and includes two types: the visual shape in the real world and the graphical shape on a map. When the shape of a building in the real world corresponds to its shape on a map, it provides a positive aid to wayfinding for participants. A typical example is the Central Library, a circular building on the map and in the real world.

The location and density of buildings and heritage are also important. The position of a building directly affects whether it is easily noticed and attracts attention, which also affects people's decision-making during wayfinding. When the positions of two or more landmarks are close to each other and form a set of clues, their role in wayfinding becomes more significant, making the area more apparent in people's mental maps. One participant pointed out that Manchester Central Library and Manchester Town Hall were very easy to recognise because of their proximity. However, the Arch in Chinatown was difficult to see from the main external road and therefore had limited effect. However, analysis of the data revealed that the significance of the Arch in wayfinding was to help people confirm their destination, and almost everyone who saw it believed they had arrived in Chinatown.

Artefacts

Artefacts in the city provide essential references, including billboards, road signs, text, graphics and other artefacts that participants notice. The most apparent clue is the text. One example is that almost all participants relied on Chinese characters to determine whether they were approaching Chinatown, even those who did not speak Chinese. Text can also be used as a landmark. Sometimes, text is part of

a building, making it a landmark. For example, the conspicuous Chinese characters of a store called ‘Bifa’ in Chinatown became a landmark. One participant emphasised that the landmark was the sign and the characters, not the store.
Billboards and signs are not only carriers of words but also important factors influencing wayfinding. People categorise them empirically and further determine the area. For example, the posters outside the Manchester Art Gallery. Many participants confirmed reaching their destination through these artefacts.
The colours and materials in the urban environment affect its recognizability. Colour sometimes carries cultural meaning and impacts the image of a city. Graphics and patterns are also important. The artefacts create a regional identity with a consistent style. Take Chinatown as an example. Chinese elements such as red fences and Chinese-style buildings become essential references.
Existing wayfinding systems were mentioned less frequently than previously mentioned artefacts. Before the first map was activated, no participant used the signage with street names as a reference. After the second map was activated, participants started looking for them because the street names were marked on the map. This indicates that the map prompted the use of these plates rather than their inherent prominence in the urban environment.

Shops

Shops are often one of the key references, but most are not considered landmarks. Shops usually attract attention because of three characteristics: shops with a particularly prominent appearance, chains of well-known brands, and shops in very distinctive buildings. Some shops may have all three of these characteristics.
Shops with a prominent appearance may be noticed because they occupy a large area on the building facade or because their signs, shop windows, or associated artefacts are particularly conspicuous. Well-known chains such as Primark, M&S, Boots and Sainsbury's are often mentioned. Chain stores that take up more space and have a more prominent appearance are easy to refer to, while smaller chain stores are not. In addition, small shops with unique building exteriors may also be mentioned.

Paths and Traffic Hubs

Roads are often overlooked, even though people always walk on them. Attention is usually drawn to particular roads, such as bridges, riverside promenades and tram tracks, which often become key navigational cues. Roads with unusual shapes also attract attention. The width affects wayfinding; wide streets are generally more precise, and participants prefer to use main streets. However, this also depends on the amount of navigational information available in the field of view.
Traffic hubs are essential reference points in cities and often influence people's impression of the city. Particularly striking traffic hubs include the large bus and tram stop next to Piccadilly Garden, the extensive tram stop at St. Peter Square and the tram stop at Exchange Square. These hubs are often noticed because of their size and large footprint.

Squares, Public Spaces and Greeneries

Some squares, green spaces, and open areas are essential references for wayfinding because of their distinctive shape on the map, particularly when they are coloured on the map, which makes them stand out even more. Conversely, without such markings, they may play a less important role in wayfinding, although participants usually rate them highly.

Seasonal and real-time information

Seasonal and real-time information constantly changes but can still affect people's impressions. My research has three types of references: plants, people and activities. Plants usually only become references when they occupy a large area or are particularly conspicuous. The characteristics (such as occupation and dress) and density of people also affect the impression of a place, and areas with moderate pedestrian flow are more popular. Festival activities and their facilities can create temporary landmarks. Overall, seasonal and real-time information has a more significant impact on the perception of a city, but it has a limited effect on wayfinding.

Mobility and Visibility

Mobility refers to movement and the ability to move, which establishes a relationship between people and space through physical changes, the use of space, and attachment to place.[20] Human movement in the city, mainly walking, has temporal and spatial dimensions that influence the construction of cognitive maps of the city because movement involves integrating a constantly changing sequence of views.[21] Visibility significantly impacts wayfinding, especially on narrow streets and between tall buildings. Visibility affects the acquisition of spatial knowledge and the construction of cognitive representations.[22] Therefore, whether the street scene is within comfortable visual range is crucial for wayfinders. People extract features from the immediate environment, seek information, orient themselves, and navigate.

REPRESENTATION OF THIS INFORMATION

In an urban environment, wayfinding relies on external features and internal representations. This information from the urban environment constitutes one of the foci in the field of wayfinding, namely external features, while another focus is internal representations.[23] After obtaining this external information, people store, encode, retrieve, recall and decode this spatial knowledge, also known as cognitive mapping.[24] According to Lynch's classic study of cities, he believes that this external information can be classified into five elements: paths, edges, districts, nodes and landmarks.[25] In this paper, Lynch's five elements will be a framework to explore how this information is represented in a cognitive map.

Landmarks are the most prominent references, recognisable features that stand out from the environment.[26] Although Lynch also emphasises that any object can be a landmark, his discussion mainly focuses on buildings. Compared to Lynch, my research shows that landmarks are only part of the wayfinding information. Participants considered some objects a reference rather than a landmark because they had a vague common-sense understanding of landmarks, which they believed were usually famous, meaningful or distinctive. Landmarks shape people's perception of the city as individual objects, but not all landmarks have this effect. For example, Queen Victoria's Statue in Piccadilly Garden is a landmark, but in perception, it is part of the garden.

The streetscape on both sides usually constructs people's impression of the road unless the road has an impressive shape or is relatively unique. In addition to the planned roads, there are also potential roads, such as the lines crossing the squares. Several intersections and three transport hubs are essential nodes but are often evaluated negatively.

Boundaries are often blurred, and the districts are small and overlap. Unlike Lynch's research, the areas of Manchester are more like small areas made up of continuous and compact information in people's understanding and perception. This may be because American cities are 'sprawl', while British cities are 'compact cities'.[27]

CONCLUSION

Research has shown that urban environmental information that plays a role in wayfinding includes architecture, heritage, artefacts, paths, traffic hubs, public spaces, shops, and real-time and seasonal information. This information is essential in enhancing the legibility and identity of the city, especially buildings and heritage. Manchester presents an urban impression of the interweaving of old and new buildings, and cognitive representations are not only related to physical features but also closely linked to social, cultural, and historical factors. This information expresses external characteristics and is presented in different forms in the cognitive map, which forms the basis for designing the wayfinding system.

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DANISH BY DESIGN: HOW A CULTURAL DESIGN ETHOS CAN SHAPE A CITY

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INTRODUCTION

This paper examines the potential of a cultural design ethos to humanize cities and to affect positive change despite growing regressive ideological and political efforts. Using a study abroad course conducted in June 2022 as an impetus, the paper focuses on Copenhagen, a city whose design philosophy has been centered around social and environmental well-being. Voted the happiest city on earth in 2019,[1] the recent change in Denmark's political climate threatens to reverse the progress made by this design-centric, eco-centric, human-centric, and forward-thinking city in the late 20th and early 21st centuries and marks a dangerous trend occurring across Europe today. By exploring a series of contemporary case studies, the paper will analyze how Danish design has permeated urban life to demonstrate the benefits of a consciousness that places the city in harmony with human beings and the environment. Following 15 female Arab students through the "happy city", we measured the impacts on a culture that prioritizes humanized design. Through documented experiential, auto-ethnographical research and creative production culminating in a multimedia journal, students generated a collection of independent and collaborative mappings of Copenhagen, exposing a willingness to experiment found throughout all aspects of design in attitude as much as practice. Finally, the paper questions the power of a collective attitude of environmental and social responsibility to stand in the face of a surging right-wing movement in the hopes of making a case for a cultural design ethos toward urban futures.

SPACE IN BETWEEN BUILDINGS: URBAN PUBLIC SPACE

Copenhagen is currently the world's most sustainable capital.[2] Like everything in Denmark, that happened not by accident but by design. In the 1980s, the city had become run down. The harbor was a polluted industrial area which discouraged citizens from coming to the city, resulting in a declining population. In an effort to revive the city's population and attract younger generations, city council decided to ask the Danish people how this could be achieved. The Danes' response to this problem was to clean the harbor to make it possible to swim in the center of the city.[3] The council accepted the challenge and embarked on an enormous and expensive project to restore the harbor which took several years. However, the investment paid off; the rehabilitation of the harbor, the heart of the city, kickstarted the revitalization of Copenhagen. People returned to the city and Copenhagen now has a diverse population of inhabitants. Swimming in the harbor began around 2002, following the completion of the Copenhagen Harbor Bath designed by Bjarke Ingels Group (BIG).[4] The waterfront

is protected by a planning system that requires it to be accessible to the public. In addition to swimming, the public can walk, cycle, or sit along the harbor turning it into a space of recreation. Now, a swim is only 15 minutes away from every Copenhagen resident. The restoration of the harbor and construction of the Copenhagen Harbor Bath has been instrumental in the evolution from an industrial port to the cultural and social center of Copenhagen, and underscores both the power of the peoples' voice and the importance placed on quality of life in Denmark.

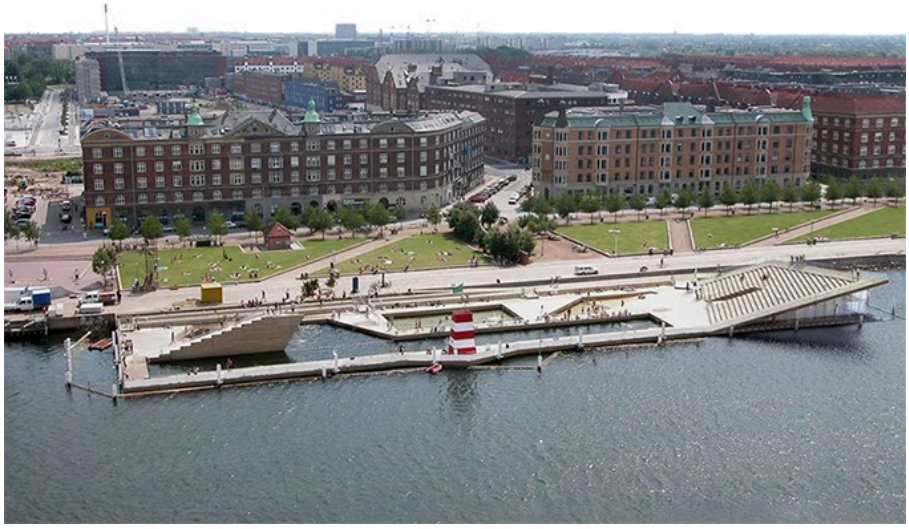

Figure 1. Copenhagen Harbor Bath by Bjarke Ingels Group (BIG). Credit: BIG

Aside from the harbor, the other dominant feature of Copenhagen is that bicycles outnumber cars. The city's urban design privileges the cyclist making it possible to cycle anywhere in Copenhagen within 20 minutes. The city's bicycle culture is supported by 500 kilometers of bike lanes and car-free bridges, and every year the city invests in expanding this infrastructure.[5] In 2014, The Bicycle Snake, designed by Dissing and Weitling Architecture was built. A significant example of cycling infrastructure in Copenhagen, The Bicycle Snake is a "highway" that permits cyclists, and pedestrians, to cross between two districts, Kalvebod Brygge and Islands Brygge, separated by water and does so in a way that gives its users a unique experience of the city.[6] In addition to bike lanes and bridges, there is storage for bicycles throughout the city. The public transportation system of trains and buses that connect all neighborhoods and suburbs of the city have dedicated bicycle compartments that allow commuters to travel with their bike at no extra cost. Almost 60% of residents travel to work and school by bicycle.[7] The investment in an efficient and safe cycling network physically separated from traffic and sidewalks, coupled with bicycle amenities on trains and buses, makes cycling both a way of life in Copenhagen and the most convenient, as well as inexpensive, way to get around the city. There is another benefit to a system of car-free mobility; Copenhagen is a quiet, peaceful, and pedestrian-friendly city.

Conceived by the studio of artist, Olafur Eliasson, Cirkelbroen is a public space of transition and conversation that happens in the process of crossing water. Completed in 2015, the bridge was designed to encourage pause and social interaction while travelling from one side to the other.[8] The intention is to slow down movement across the bridge by "snaking" through it and in the process, potentially encounter someone you know, or don't know, or see the city in a new perspective. Eliasson inventively achieved this by using a string of connected circles instead of a normative

straight line connecting “point A” to “point B.” The circular geometry creates pockets of space to either side of the circles’ center to enable people to stop and converse without interrupting the flow of foot and bicycle traffic. Eliasson saw the bridge as an opportunity to create socio-cultural connection from utilitarian urban infrastructure.

Figure 2. Cirkelbroen by Studio Olafur Eliasson. Credit: Anders Sune Berg

CITIES WITHIN BUILDINGS: MIXED-USE ARCHITECTURE

Completed in 2019 and designed by BIG, CopenHill is an innovative power plant on its interior and park on its exterior with an artificial ski slope on the roof. The energy it produces comes from incinerating local trash and is used to provide high efficiency low-cost heating to the city.[9] The only emission the plant produces from converting the waste to energy is water vapor. In addition to year round skiing, during the summer months, the rooftop park provides visitors with hiking trails, playgrounds, fitness structures, running trails, wall climbing on the building façade, and unparalleled views of the city.[10] The building is an architectural landmark exemplifying the future of responsible waste management and energy production as well as new models of urban public space. CopenHill demonstrates novel ways in which essential, utilitarian buildings can be inserted into dense areas of the city and turned into social infrastructure that encourages public participation.[11] It is an example that a sustainable city is not only better for the environment, it is also more enjoyable for the lives of its citizens.

Figure 3. CopenHill Energy Plant by BIG. Credit: Laurian Ghinitoiu and Dragoer Luftfoto

BLOX is a mini city knotted around one of Copenhagen's main ring roads that connects the harbor front to the city bringing culture to the water's edge. In use since 2018, the building is home to a variety of programs including the Danish Architecture Center (DAC) located at its center, exhibition spaces, offices, co-working spaces, a café, a bookstore, a fitness centre, a restaurant, twenty-two apartments, and an underground automated public carpark.[12] "BLOX's interlocking design re-works a city block as a three dimensional loop"[13] embedding functions inside other functions. The result is a theatre of production exhibited to the offices as well as the general public exposed by the building's transparent interconnected blocks. The intertwining programs create a rich environment of social interaction encouraging creative cross-pollination between the various companies and visitors. The Office for Metropolitan Architecture (OMA), the architects responsible for BLOX, explain how the building engages inhabitants at an urban scale: "Contrary to most city blocks in Copenhagen – often introverted and inaccessible – the building absorbs the city's life. The urban routes through the building lead to unexpected and unpredictable interactions between the building and the city, linking the different museums, libraries and historical sites around the culturally rich Slotsholmen area."[14]

SPACES OF DOMESTICITY: HOUSING

8 House is an example of BIG's "architectural alchemy"[15] – the idea that by mixing traditional ingredients, retail, row-houses, and apartments in untraditional ways – added value or "gold" can be created.[16] Built in 2010, the residential complex is a perimeter block that knots to allow individual activities to find the most ideal location within the building's framework, such as retail facing the street and residences with sun and views to open spaces, to maximize the life quality of its inhabitants.[17] "Rather than a traditional block, the 8 House stacks all ingredients of a lively urban neighborhood into horizontal layers of typologies connected by a continuous promenade and cycling path up to the 10th floor creating a three-dimensional urban neighborhood where suburban life merges with the energy of a city, where business and housing co-exist"[18], explains Bjarke Ingels, Founding Partner of BIG. The continuous public path which stretches from street level to the penthouses creates an opportunity for social life, spontaneous encounters, and neighborly interaction to unfold beyond the ground level. The two openings in the figure "8" create interior courtyards and communal facilities for all residents.

Urban Rigger is an experimental student housing project designed to find an economical, reproduceable building typology that utilizes the harbor. The first prototype, designed by BIG architects, was completed in 2016 and has since been successfully multiplied to create a community on the waterfront of Refshaleoen in Copenhagen.[19] Currently, there are six Riggers each with 12 apartments housing a total of approximately 100 students. Designed to address the increasing population of students and need to house them, Urban Rigger explores a strategy that allows cities to expand on adjacent water bodies, typically underdeveloped area at the heart of the city.[20] The project

makes use of the standard shipping container as a framework for a flexible building system. The container units are stacked in a circle creating residences which frame a central shared courtyard used as a common meeting place for students. Urban Rigger is an affordable co-housing solution that keeps students in the city center and can be replicated as needed in other harbor cities where space is limited.[21]

SPACES OF EXHIBITION: CITY AS GALLERY

Copenhagen's annual design festival, *3 Days of Design*, transforms the city into a dynamic urban exhibition space and social playground for design. Rather than carry on the tradition of wastefulness that design festivals and tradeshows are notorious for, the city becomes the venue of *3 Days of Design*. The festival takes place in showrooms, shops, streets, galleries, and various other venues throughout Denmark's capital.[22] Designers and companies reimagine spaces of creative production for showcase during *3 Days of Design*. Festival attendees visit a diverse collection of venues and events as they explore the city, instead of hopping from one temporary booth to another inside of an isolated, artificial "big box" environment typically distanced from the city center. When the festival ends, showrooms simply rearrange their dedicated space. There is no disassembling and discarding of a booth, and nothing to ship back to the showroom. The *3 Days of Design* festival demonstrates a sensitivity toward the environment that is leveraged to improve human experience at multiple levels and types of activity in the city.

Located in the Frederiksberg district of Copenhagen, Cisternerne is a reservoir where drinking water was collected and distributed to the city from 1859 until 1933.[23] In 2001, it opened as a Museum of Modern Glass Art reimagining the underground water reservoir as exhibition space, and in 2013, The Frederiksberg Museums took over Cisternerne relaunching the exhibition venue for site specific art experiences.[24] Rather than treating the historical landmark as an attraction and monetizing its appeal, The Frederiksberg Museums converted it into a subterranean space of exhibition, creative experimentation, and historical education, free to all residents. With annual art exhibitions focused on immersive experiences, Cisternerne transform into a place of imagination and inspiration for the communities it serves.

Figure 4. Cisternerne, The Frederiksberg Museums. Credit: Tania Ursomarzo

2022 COPENHAGEN SUMMER STUDY ABROAD

Summer Study Abroad is a program offered by the American University of Sharjah that gives students the opportunity to supplement education in their field of study in another part of the world. In June 2022, we traveled from Dubai to Copenhagen with 15 female Arab students majoring in architecture at the College of Architecture, Art, and Design. The course investigates the ways in which Copenhagen is a city shaped by good design. Using design as the catalyst, students researched a cultural ethos that prioritizes human experience, well-being, and its relationship to a healthy environment. The course is organized by 'scales' of design – *object, building, city* – while congruently framed by the 'forces' influencing Danish design – *people, experience, and ecology* – and, together, become the criteria through which Danish design is analyzed. Using the city as a classroom, students explored, in-situ, Danish design examples from the urban to the artifact. Field research formed the basis of independent and team-based analytical case studies that generated a collection of experiential mappings of the city of Copenhagen documented through a multimedia journal.

The student projects that follow exemplify how research conducted during the study trip was synthesized to illustrate perspectives on Danish design culture as interpreted through student experience in the city of Copenhagen. Alzaina Lootah's mapping visualizes the pedestrian accessibility and walking routes of the city undertaken throughout the trip. The mapping reinforces the prioritization of human over vehicular traffic in the urban design of both old and newly developed areas of the city. Maryam AlQassim examines how sustainable design can define a city's cultural identity and outlines nine key elements that characterize Denmark's approach to sustainable design which she highlights in a series of posters. Nujud AlHussain explores memory and lived experience which she reconstructs through daily and weekly photographic collage using three different mediums of analogue and digital photography. The photographic mapping addresses the intangible nature of memory and our inherent need to create tangible evidence of lived experiences. The photos were overlaid and stitched together in various opacities representing the way some memories fade while others remain clear, and were placed in chronological order to create a memorial timeline of the study trip highlighting the spatial qualities of case studies visited. Salama Obaid AlHammadi's research is presented as a multimedia digital book titled, *Disparity and the In-Between*, combining photography, postcards with her written thoughts and ideas captured in real time during the trip, as well as audio recordings of interesting conversations, soundscapes and acoustics, linking them to design theory and philosophy. Her multi-sensory book reflects on the harmonious co-existence of contrasts in the city of Copenhagen – growing and decaying, adding and taking away, light and dark, form and function, natural and man-made, old and new – and how they relate to human experience. She probes the city from a sensorial perspective to study how people emotionally and experientially engage with contrasts in Danish design. The multimedia student projects were exhibited in the College of Architecture, Art, and Design at the American University of Sharjah in November 2022.

Figure 5. Mapping of Walking and Pedestrian Accessibility of the City by student, Alzaina Lootah. Credit: Alzaina Lootah

Figure 6. Sustainability and Identity by student, Maryam AlQassim. Credit: Maryam AlQassim

Figure 7. Re(Constructing) Memory by student, Nujud AlHussain. Credit: Nujud AlHussain

Figure 8. Disparity and the In-Between by student, Salama Obaid AlHammadi. Credit: Salama Obaid AlHammadi

Figure 9. Copenhagen Summer Study Abroad Exhibition, American University of Sharjah, 2022. Credit: Tania Ursomarzo

DENMARK'S CURRENT POLITICAL CLIMATE AND TENSIONS

With well-being of people and planet being amongst its celebrated qualities, other European countries, such as Scotland, seek to emulate Denmark's positive model.[25] While Denmark has many favorable qualities to praise, a shift in the political climate has questioned whether the country's progressive

attitude will survive in the face of rising right-wing ideology. For decades, Denmark was seen as a haven for migration regardless of origin, race, or religion.[26] The country's historical tolerance toward migrants however, has taken an anti-migrant turn in recent years. Two of the four continental Nordic countries are no longer in the hands of social democratic parties; conservative parties have made inroads shifting migration policy.[27] Presently, Denmark is governed by a majority social democratic party only by tightening immigration policies in order to gain favor in government. In Denmark, the center-left has returned to power by leaning to the right on immigration.[28] In 2022, Mette Frederiksen, Denmark's Prime Minister, passed an anti-migrant law effectively closing its borders to immigration. During the 1997 referendum, the Nordic European countries signed an opt-out exempting them from complying with European laws around asylum, distribution of refugees, and irregular refugees.[29] As a result, Denmark can have a zero refugee policy, amongst other recent initiatives that have led to a complete paradigm shift in immigration policy in the European Union (EU). Fredericksen's anti-migrant law includes the voluntary departure of immigrants and refugees, and expulsion of illegal immigrants.[30] Residence permits granted to asylum seekers are now temporary and their duration reduced to the EU minimum. Most controversial is Denmark's Syrian refugee policy or revocation of residence visas. Danish authorities are threatening already settled, legal Syrian refugees with deportation to Syria, claiming against considerable evidence that the Damascus area and two other regions are safe.[31] Immigrants that have been ordered to leave and do not do so voluntarily remain in deportation centers, such as Kaershovedgaard, a former prison, for unknown periods of time awaiting removal.[32] Although Denmark cannot send Syrians back to Syria, the temporality of asylum, if granted, and fear of languishing in return centers is a deterrence to migrants.

One of the most radical of Denmark's initiatives to control where and how immigrants live was the enactment of an anti-ghetto law in 2021 to prevent the formation of "parallel societies".[33] By 2030, Fredericksen's social democratic government intends to reorganize and redesign public housing neighborhoods that have a high concentration of immigrants, or, ghettos of foreigners that form closed communities.[34] Mjølnerparken, located in Copenhagen's northern neighborhood, Nørrebro, is a public housing estate with over eighty percent of residents of non-Western origin that Denmark's government deems a "parallel society".[35] Social housing is sold off to the private sector for redevelopment with residents evicted and rehoused elsewhere. New private housing is sold to well-educated people with high-paying jobs and higher purchasing power. Mjølnerparken has been under renovation since 2023 as it transitions to private housing with new inhabitants. The idea behind the program is to relocate and dilute the immigrant population within Danish society preventing foreigners from isolating and failing to integrate with the rest of society.[36] Danes take the view that it is disadvantageous to grow up in a neighborhood where there are many social problems because concentrating social problems increases them. Conceptually, the integration of immigrants and locals within the wider Danish population to encourage equality and socialization is not a bad idea. On the other hand, the forced relocation of immigrants can be seen as extreme and inhumane, especially if residents have built a life in a home situated within public housing.

As Europe struggles with how to handle migration policy across the continent, many countries are looking to Denmark, now having one of the strictest migration policies in the European Union. In 2022, Denmark was the first EU country that planned to outsource the processing of asylum requests.[37] Asylum seekers heading to Denmark are relocated to Rwanda while a decision is reached on their application.[38] While the plan was subsequently abandoned, other EU countries such as Italy and Germany took interest in the idea. Italy's Prime Minister, Georgia Meloni, signed a protocol with Albania in 2023 to send asylum seekers rescued in the Mediterranean to reception centers off the port of Shenjin.[39] Whether or not a plan is officially legislated, Denmark appears to be leading Europe's

anti-immigration policies. Is Denmark still a positive model for other European countries or a negative one? And, will Copenhagen remain the happiest city on earth, and for whom?

SUPERKILEN PARK: MULTICULTURAL PUBLIC SPACE

Designed by BIG architects in collaboration with Superflex and Topotek 1 landscape architects, Superkilen Park is perhaps the most significant case study analyzed during the Copenhagen study trip. "Superkilen is a half mile long urban space wedging through one of the most ethnically diverse and socially challenged neighborhoods in Denmark."[40] Completed in 2012, and visible from many points of the city, the park is an international exhibition of artefacts from 60 different nationalities of people inhabiting the area surrounding it.[41] The objects are transformed into functional, recreative urban design in an impressive space to play, exercise, cook, eat, and relax. As Bjarke Ingels explains, "…a sort of surrealist collection of global urban diversity that in fact reflects the true nature of the local neighborhood – rather than perpetuating a petrified image of homogenous Denmark."[42] Instead of neglecting the impoverished neighborhood of Nørrebro, home to Copenhagen's largest population of immigrants and the Mjølnerparken public housing estate, it is prioritized. Superkilen Park represents the Danish sensibility that public space is the great urban equalizer that transcends cultural and ideological boundaries. Public space is abundant, inventive, and inclusive in Copenhagen. Colorful, playful Superkilen supports the multi-cultural richness of greater Denmark.

Figure 10. Superkilen Park by BIG, Topotek1, and Superflex. Credit: Iwan Baan

CONCLUSION

In reflecting on the case studies that have shaped the city of Copenhagen and the impact of the study abroad program on architecture students, I would like to return to a project investigated earlier in the paper through the lens of its author. Olafur Eliasson, an internationally-renown Danish-Icelandic artist, eloquently describes the cultural role and significance of urban design in Denmark in the context of speaking about his project, Cirkelbroen:

In Copenhagen, progress has been made in thinking about what constitutes quality in urban space and about the atmosphere of a space. Obviously, one cannot plan atmosphere, as it is co-produced by the people who use the space, but it is possible to nurture an atmosphere, to allow it to grow. As an artist, I work with abstract and emotional qualities, so this is where, I believe, art can play a role.

In Denmark, there is a strong tradition of focusing on inclusion, on accepting the other – welcoming ideas that we have not yet had, people we have not yet met, and unpredictable encounters. It's

something we all have to work on together, and one way of addressing this is in how we plan public space. Cirkelbroen, I hope, will contribute to improving the quality of life and the development of a hospitable and inclusive city.[43]

While Eliasson's perspective may not reflect the opinion of all Danes, Cirkelbroen and many of the other case studies examined during the study trip and discussed in this paper, are contemporary public projects commissioned by the city. To me, this signals that design and its effect on quality of life remain a core value in Denmark, regardless of the ethnic origins of its residents. If recognizing the presence and experience of immigrants as part of the larger cultural and urban fabric of the country is not important to Danes, how is the investment in a complex public project such as Superkilen Park justified? Superkilen was, in fact, created during the rise of the refugee crisis in Denmark.

Copenhagen has transformed dramatically since the 1980s thanks to a cultural design ethos that champions ecology and well-being. Eliasson's statement, along with the experiential research conducted together with my class of 15 Arab students in Copenhagen, demonstrates that design continues to be about democratizing space for people, making Copenhagen a uniquely sensitive, livable, contemporary city.

NOTES

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URBAN LIVABILITY IN SHANGHAI'S POST-DEMOLITION ERA: AN ANALYTICAL REVIEW

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INTRODUCTION

Shanghai has undergone a significant transformation in its urban landscape, transitioning from densely populated Penghu settlements[1] to a reimagined metropolitan identity in the post-demolition era.

This research seeks to critically analyze the lived experiences of those displaced by this sweeping urban renewal. Although the demolitions aimed to improve living conditions, they often resulted in significant upheaval, forcing long-time residents into unfamiliar suburban environments. This study explores the multifaceted implications of these relocations, delving into the identity transitions experienced by residents as they adapt to their new neighborhoods, the reconfiguration of social networks, and their overall satisfaction with improved living conditions juxtaposed against loss of community ties and accessibility to essential services.

Demolition in Shanghai and the Historical Context

The Penghu settlements, which emerged in Shanghai during the 1920s as shelters for migrants from other provinces, have played a significant role in the city's residential culture, particularly for populations who lived at the bottom of society. In 1949, when the People's Republic of China was founded, all Penghu settlements were located on the periphery of downtown Shanghai, housing nearly a fifth of the city's inhabitants.[2] However, throughout the urban development process of the 1950s and 1960s, the downtown area expanded, subsequently incorporating these peripheral settlements.

Figure 1. Shanghai's downtown area and Penghu settlements before 1949 (left) and in the 1960s (right). Red: Downtown Area; Yellow: Penghu Settlements; Blue line: Administrative boundaries.

Characterized by their substandard housing conditions as shanties and shacks,[3] the Penghu settlements often housed multiple generations in confined spaces, with average living areas ranging from two to four square meters per individual.[4] Unlike Shikumen and lane houses, which held more historical, cultural, or political significance, Penghu settlements were always considered dirty, messy, and poor, posing significant challenges due to their dilapidated conditions and management issues, which ultimately led to their complete demolition during the process of urban development.[5]

Figure 2. Exterior and interior look of typical Penghu settlements in Shanghai.

In the 1980s, China's Reform and Opening-up provided new opportunities for Shanghai's modernization. The government introduced an urban development strategy that integrated the construction of new residential areas with the reconstruction of old downtown neighborhoods.[6] In 1992, as part of the 365 Housing Renovations Task – which aimed to renovate 3.65 million square meters of old downtown housing by the 21st century – the Penghu settlements began to be demolished through a combination of land leasing, real estate development, and municipal construction.[7] This large-scale demolition was executed in two phases.[8] The first phase, during the 1990s, saw substantial government investment to incentivize developers to renovate and construct housing on or near the original demolition sites. Consequently, many residents were able to return to their neighborhoods, while a small number relocated to suburban areas to obtain larger living spaces. However, as the project entered its second phase in 2000, demolition increasingly led to the displacement of residents, marking a shift from improving the living environment in situ to relocating residents away from their original homes.

As China recognized real estate as a key pillar industry and implemented new housing reform policies, Shanghai's housing prices began to enter a phase of rapid growth, leading to increased demolition costs in the downtown area. Adhering to the principle of maximizing the benefits of differential land rent, the locations designated for resettlement housing progressively extended outward –from "near the original location" to "slightly outside the downtown area", then further to "the outer ring distant from the city center", and eventually to "the remote suburbs. "[9]

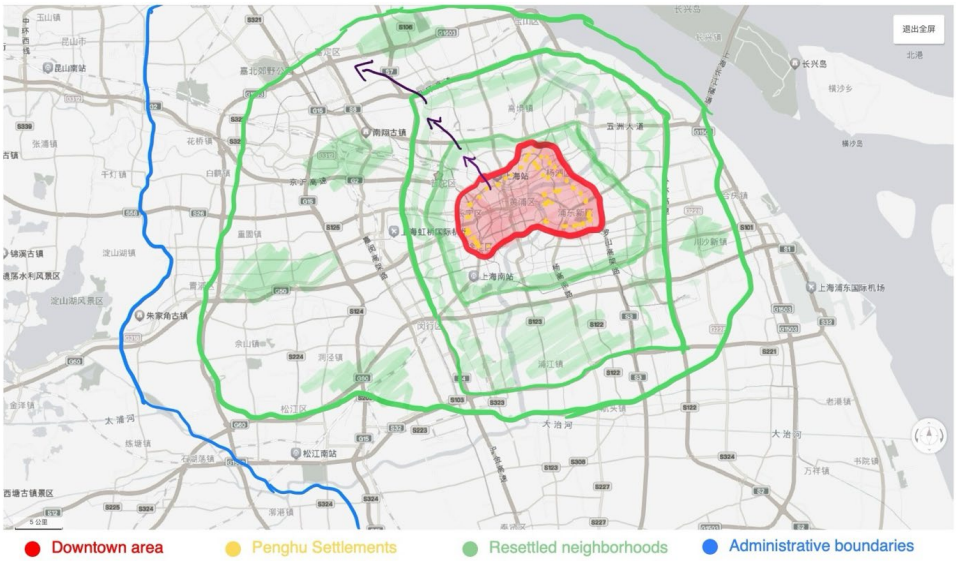

Figure 3. The locations designated for resettlement housing progressively extended outward.

By the early 21st century, numerous scholars conducted studies on the Penghu settlements slated for demolition and found that many residents were experiencing significant unease and anxiety regarding their impending relocation to undeveloped suburban areas.[10] This apprehension was largely driven by the fact that these residents had never previously lived at such a considerable distance from the downtown.

By June 2022, after three decades of extensive demolition and renovation, Shanghai announced the completion of its urban renewal initiatives in the downtown area.[11] The once-prevalent Penghu settlements have vanished, and large-scale demolitions are now a matter of history. Shanghai has entered a post-demolition era, presenting a transformed metropolitan image to the world. As these settlements have disappeared, so too have their residents, gradually fading from the focus of both media and academic research. What are the lives of these residents like in their new neighborhoods? How did they initially cope with the transition? How has their existence transformed since the demolitions? And what experiences have shaped their journey? This study seeks to investigate the post-demolition experiences of these individuals, examining their adaptation to new living conditions and the ways their lives have transformed following relocation.

In contrast to the more extensively studied Shikumen and lane houses, Penghu settlements have received limited scholarly attention. Yet, examining the dynamics of their forced disappearance offers critical insights into the interrelation between belonging, urban history, social and economic forces, and planning initiatives in contemporary Chinese cities.

METHODOLOGY

In pursuit of these research objectives, fieldwork was conducted in four resettled neighborhoods, employing in-depth interviews with the residents who experienced demolition between 2014 and 2016. These individuals have relocated from Penghu settlements north of Suzhou Creek,[12] an area that once housed the largest concentration of Penghu neighborhoods in Shanghai. The four resettlement neighborhoods vary in proximity to the city center, with the nearest (and smallest) located near the Middle Ring,[13] approximately 10km from the city center, and the farthest situated in Qingpu district at the junction of Suzhou and Shanghai, roughly 40km from downtown (Figure 4). The interviews primarily explored the residents' life experiences before and after the demolition, including the demolition policies in effect at the time, their choice regarding resettlement housing, their sentiments

upon moving into new homes, and the changes in their lives over the past 8-10 years since the demolition.

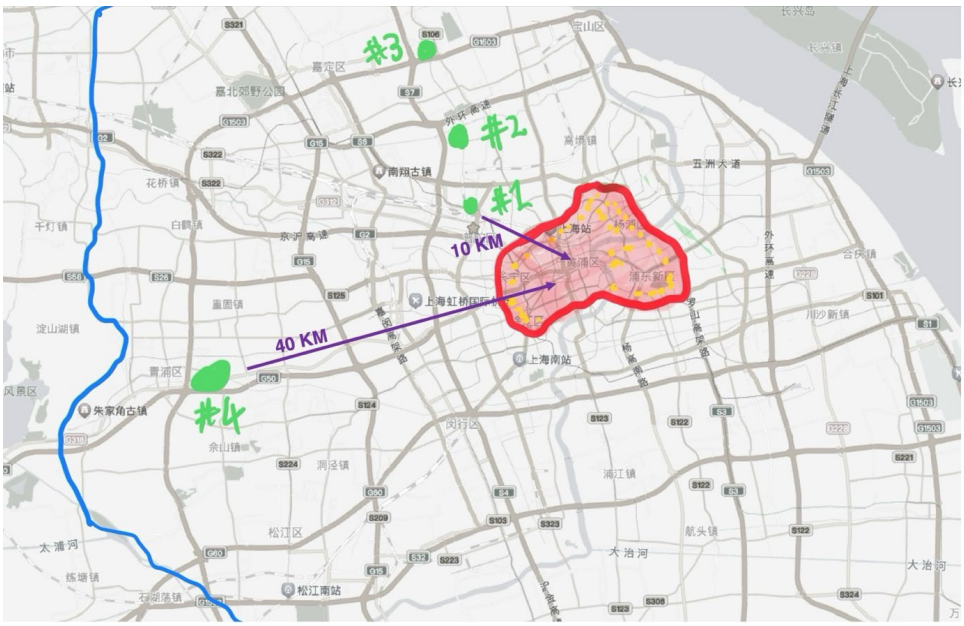

Figure 4. The location of four surveyed resettled neighborhoods (labeled in green).

RESULTS

Fieldwork revealed that resettled residents experienced complex emotional transformations during the demolition process. On one hand, they suffered identity changes, along with the loss of conveniences associated with downtown living and the dissolution of previous neighborhood relationships. On the other hand, the significant improvement in living conditions led to a high level of satisfaction.

Before the survey commenced, it was hypothesized that residents would harbor resentment when "forced" to relocate from their urban environments and that concerns would arise about the potential fragmentation of previous close-knit interpersonal relationships due to the transition to modern residential buildings. However, contrary to these expectations, the majority of resettled residents exhibited a greater acceptance of their new circumstances than anticipated. This acceptance can be attributed to a range of factors.

Identity Change

The loss of a convenient life has had a significant impact on the residents, profoundly altering their sense of identity. For many years, these individuals faced a major shift in their self-perception. Prior to the demolition, the resettlement locations were in suburban or rural areas that they had never considered or visited. Upon learning that these new buildings, surrounded by farmland, would become their new home, they experienced a sense of disorientation and loss. They felt the loss of pride in belonging to Shanghai, one of the most developed cities, as though they had been marginalized. This sentiment was particularly pronounced among residents in the most distant neighborhoods. In the first two years following the demolition, many referred to traveling downtown as “going to Shanghai", as if they had left the city the day they were relocated. However, as time passed and the suburbs developed, these residents began establishing a new connection and sense of identity with their surroundings. Today, only a few still refer to "going downtown" as "going to Shanghai".

The Loss and Reconstruction of Neighborhood Relationships

During the demolition and relocation process, residents' interpersonal relationships underwent significant changes. As the cost of travel increased, their willingness to go downtown diminished considerably. Consequently, the original social networks were gradually dismantled and reconstructed in the new community. In Qingpu, the most distant neighborhood, the majority of residents are retired employees who do not live with their children. Given the long distances involved, in emergencies such as strokes or fainting, these residents often depend on their new neighbors for timely assistance. This dynamic reflects the Chinese saying, "distant relatives are not as helpful as close neighbors." Over time, initially unfamiliar neighbors forged close bonds, learning to rely on one another for support.

Improved Living Conditions

A critical factor contributing to the transformation of Shanghai's urban landscape has been the marked improvement in living conditions. Residential space per capita increased significantly, from 2-4 square meters to 25-35 square meters, providing much-needed privacy. The once-common scenario of multiple generations sharing a single room has become a relic of the past, allowing children and parents to enjoy separate living spaces. Furthermore, modern amenities have been introduced, fundamentally altering daily life. The cumbersome practice of managing portable toilets (Figure 5), once emblematic of lane life in Shanghai,[14] has been supplanted by the availability of independent bathrooms. The inclusion of flush toilets and showers in these new apartments represents a substantial enhancement in residents' quality of life. The significance of these improvements cannot be overstated.

Figure 5. Portable toilets in Penghu settlements and lanes.

Delayed or Inadequate Life Services

Despite the overall success of the relocation process, several issues remain unresolved, particularly regarding the accessibility of essential services. Although the new residential areas offer improvements, residents have lost the convenience associated with downtown living. In the four neighborhoods surveyed, the development of essential services and facilities has not kept pace with the rapid construction of housing. During the initial years following resettlement, residents frequently encountered difficulties in accessing basic necessities, such as groceries and medical care, leading to unmet essential living needs. For instance, in the Baoshan neighborhood, while a subway line provided relatively quick access to the city center within 40 minutes, the immediate vicinity lacked commercial amenities. The nearest grocery store was located several kilometers away, creating significant inconvenience. Although the subsequent population growth in the area has led to the establishment of hospitals, supermarkets, and restaurants, the quality of medical care remains inferior compared to that of downtown centers (Figure 6).

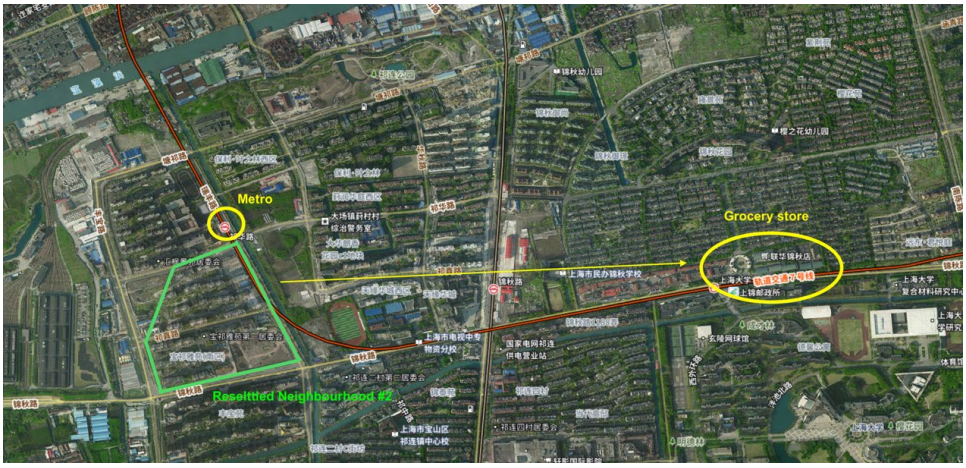

Figure 6. The location of the metro and grocery store in #2 surveyed resettled neighborhood.

In contrast, the residents of Qingpu, situated 50 kilometers from downtown Shanghai, have faced significant challenges since their resettlement in 2016. Their community remains largely isolated, surrounded by farmland and ongoing construction. Although a grocery store and a small market are available within the block, the lack of nearby competition has led to higher prices, which has caused considerable dissatisfaction among the residents. Consequently, many are forced to resort to online shopping or travel to neighboring towns with more established residential areas to find more affordable prices and higher-quality products. When it comes to traveling downtown, the prevailing attitude is one of reluctance—"don't go unless necessary." Before the subway line was extended to the area in 2018, the journey to the city center could take nearly three hours; even now, the quickest route requires more than two hours. Although driving offers a faster alternative, the prohibitive cost makes it an impractical option for most (Figure 7). Despite these challenges, residents remain optimistic, expressing hope that "it will become more convenient in the near future."

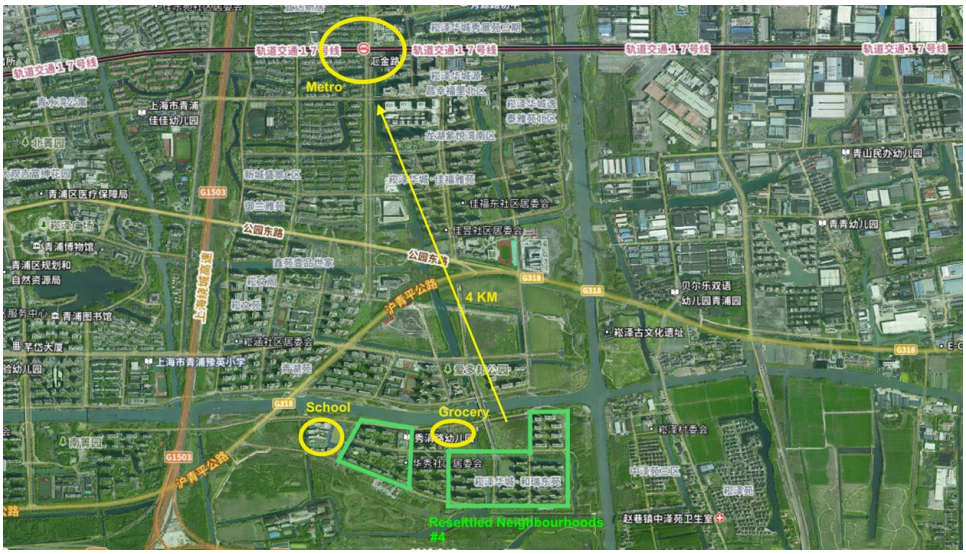

Figure 7. The location of the metro, school, and grocery store in #4 surveyed resettled neighborhood.

DISCUSSION

The findings of this study diverge markedly from initial expectations. Contrary to anticipated levels of sadness and dissatisfaction, relocated residents exhibit a greater degree of understanding and acceptance regarding their new living conditions. This shift in attitude reflects a broader transition from passive relocation to active acceptance, highlighting the transformative experiences of many resettled residents during China's rapid economic growth and marketization following the 1998 housing reforms. The process of relocation not only underscores the continuous expansion of Shanghai's urban boundaries but also represents a renewal of the city's landscape. As the developmental disparities between suburban and downtown areas diminish, the sense of identity dislocation experienced by relocated residents is expected to gradually fade. This shift speaks to the resilience of these communities as they adapt to new circumstances, often finding new ways to rebuild their sense of belonging and connection to the city.

One significant element of this transformation is the broader societal context in which it takes place. The rapid urbanization of Shanghai has not only been driven by the expansion of residential areas but also by an overarching government vision of creating a modern, global metropolis. The ongoing transformation of the urban fabric, with its accompanying rise in living standards, speaks to a larger ambition that goes beyond individual experiences of displacement. It demonstrates how such processes can be both a source of anxiety and, paradoxically, a pathway to new opportunities for residents. As resettled communities gradually integrate into the fabric of Shanghai's evolving urban structure, the opportunity for greater mobility and connectivity becomes possible, though not without the initial disorientation and loss associated with uprooting.

Since 2014, Shanghai has been at the forefront of implementing the "15-minute community living circle"[15] concept, designed to enable residents to access essential services within a 15-minute walk. Although more than 1,600 such living circles have been established since 2022, including in all four neighborhoods examined in this study, the provision of services and facilities remains insufficient, particularly when compared to more densely populated areas. This inadequacy continues to pose significant challenges for many resettled residents. Notably, as these new communities continue to expand, the gap between the intentions of urban planning and the lived realities of residents highlights a critical tension. Despite advances in urban development, residents still struggle with the limitations of underdeveloped infrastructure, often finding themselves in a liminal space where expectations of urban convenience clash with the realities of suburban isolation.

Shanghai Livability in the Post-Demolition Era

Urban livability is increasingly recognized as a multifaceted concept that encompasses the overall quality of life within an urban setting. In 2024, a collaborative research initiative assessed the livability of Shanghai by examining the availability and accessibility of essential amenities and services, including education, entertainment, transportation, healthcare, and residential services.[16] The findings revealed that educational and medical services—crucial elements of urban public infrastructure—are less accessible in suburban and remote areas, corroborating the results of my research. In communities with a higher proportion of elderly residents, prioritizing medical services within supportive facilities is essential. Conversely, transportation, entertainment, and education are pivotal for attracting younger residents, thereby sustaining community vitality. To enhance the quality of life for resettled residents and ensure they benefit from urban development alongside those in central areas, urban designers and policymakers should focus on exploring the following areas further:

1. Medical Services

It is imperative to prioritize the deployment of Automatic External Defibrillators (AEDs) and the provision of Cardiopulmonary Resuscitation (CPR) training to bolster public health emergency responses. This approach ensures the availability of prompt and high-quality health services for residents across all age groups.

2. Public Transportation

The development of enhanced supporting infrastructure should promote the integration of "subway/bus + cycling" modes of transport, thereby improving travel efficiency and supporting sustainable living practices. Increased accessibility to shared bicycles and electric bikes is particularly crucial for neighborhoods located at a distance from bus and subway stations.

3. Cultural and Entertainment Facilities

The establishment of public activity centers is essential for invigorating community life. Such facilities offer spaces for social interactions, thereby fostering stronger communal bonds and contributing to a more fulfilling quality of life. The role of these spaces extends beyond leisure, functioning as hubs for community integration, where residents can share experiences and develop new social ties.

By addressing these key areas, urban development in Shanghai can strike a balance between economic growth and the well-being of all residents, ensuring that the benefits of progress are equitably distributed and that the long-standing negative impacts of displacement are effectively mitigated.

CONCLUSION

The resettlement of residents from Shanghai's Penghu settlements represents a significant urban transformation, reflecting the broader trends of rapid development and urbanization in contemporary China. Understanding the experiences and perspectives of these individuals provides valuable insights into the complexities of urban development, the interplay between economic progress and social well-being, and the evolving notions of community and belonging in the Chinese context. This study illustrates that while the initial stages of demolition were fraught with challenges, many resettled residents ultimately found new ways to establish a sense of home in their new neighborhoods. It is clear that, despite the initial displacement, the reconfiguration of living conditions and social networks holds the potential for positive outcomes.

As Shanghai continues to grow and redefine its urban landscape, the experiences of resettled residents serve as a reminder that development should be approached holistically. Economic progress must be balanced with social inclusivity, ensuring that all residents have access to the opportunities and benefits that come with urban development. The complexities of urban renewal cannot be understood solely through the lens of economic growth but rather through a recognition of the lived experiences of those affected by these transformations.

To foster a truly livable and inclusive urban environment, it is crucial for policymakers and urban planners to prioritize the needs of these residents. A city that actively respects and engages with its citizens is more likely to cultivate reciprocal respect and community involvement.[17] By addressing the challenges faced by resettled residents, policymakers and urban planners can work towards creating a more livable and inclusive urban environment in Shanghai. In doing so, Shanghai can set a global example for how urban renewal can be achieved without sacrificing the dignity and well-being of its people. Through thoughtful and inclusive planning, urban growth can be not just an economic or physical transformation but a process that fosters social cohesion and collective prosperity.

NOTES

[1] In Shanghai, the term "Penghu" is the official term for certain types of shabby houses. Penghu also refers to the inhabitants of Penghu settlements, although these people are more commonly called Penghu residents.
For the classification of housing types in Shanghai, see Shanghai Statistics Bureau, *Shanghai Statistical Yearbook* (Shanghai People's Publishing House, 1988), 438-441
[2] Yingfang Chen, ed., *Life and Memory in Shanghai's Shanty Neighborhoods* (Antique Books Press, 2006), 15-24
[3] Hanchao Lu, *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century* (University of California Press, 1999), 112
[4] Shanghai Academy of Social Sciences Institute of Economics, ed., *The Transformation of Shanghai Penghu Settlements* (Shanghai People's Publishing House, 1960), 13; Lu, 119-122
[5] Junfan Wu, "The Construction and Transfer of the Stigma of Shanghai Shanty Settlements: An Angle of Historical Memory," Journal of Social Science 8 (2014): 68-73; Yanbo Li, *The Value of Shanghai's Lane House Neighborhood* (Tongji University Press, 2014), 43
[6] Shanghai Housing Editorial Department, ed., *Shanghai Housing,* 1949-1990 (Shanghai Popular Science Press, 1993), 7
[7] Mingqian Xu, *The Context of the City: A new Discussion on the Development Mode of Old Residential Areas in Downtown,* (Academia Press, 2004)
[8] Li, 196-203
[9] Li, 200
[10] Chen, 10-11.; Rujiang Ge et al. "Mansions VS Shantytowns, The Rich and The Poor Separated by A Wall." Legal System and Economy, 2009, (12): 3.; Junfan Wu, "Changes of Shanghai Shantytowns and Its Social and Cultural Mentality from the Perspective of Urban Landscape," China Ancient City, 1 (2012): 36-42.
[11] Yong Wan, "Thirty Years of Urban Renewal in Shanghai: Process, Exploration and Results," The Paper, December 10, 2022, https://www.thepaper.cn/newsDetail_forward_21109888
[12] "Suzhou Creek", also called "Soochow Creek" or the Wusong River, is a river that passes through the Shanghai city center. After Shanghai was opened as a port in the mid-nineteenth century, some adventurous foreigners in Shanghai traveled with a boat and went up the Wusong River directly to Suzhou. So they called it the "Suzhou Creek".
[13] "Shanghai Middle Ring Road", also known as the Middle Ring Line, is a closed circular expressway for automotive vehicles in Shanghai. It is located between the Inner Ring Elevated Road and the S20 Highway (Outer Ring Expressway). It is one of the four ring expressways in Shanghai (Inner Ring, Middle Ring, Outer Ring, and Ring Road).
[14]Weicheng Guo, "Small Toilets Plague Shanghai," People's Daily, February 18, 2010; Jianchun Xin, Ge Guo, Pengcheng Li, "Exploration and Practice of Bathroom Renovation in Shanghai Lane Houses," Housing Science 1 (2019).
[15] In 2016, Shanghai Urban Planning and Land Resources Administration Bureau released "Planning Guidance of 15-Minute Community-Life Circle", advocating the establishment of 15-minute community-life circles. In 2021, In 2021, the "15-minute Community-Life Circle Action - Shanghai Initiative" was jointly issued with 52 cities across the country during the Shanghai Urban Space Art Season. By the end of 2023, there were nearly 3,000 projects under the action. https://ghzyj.sh.gov.cn/nw2423/
[16] Yin Long et al. "Assessing Urban Livability in Shanghai Through An Open Source Data-driven Approach." npj Urban Sustainability 4, no. 7 (2024), https://doi.org/10.1038/s42949-024-00146-z
[17] Charles Montgomery, *Happy City: Transforming Our Lives Through Urban Design*. (Penguin UK, 2013), 250

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A QUESTION OF CHARACTER: INTERIOR ARCHITECTURE AS AN INSTRUMENT FOR LONGEVITY IN HERITAGE STRUCTURES

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INTRODUCTION

As societal needs change, repurposing historic buildings becomes a delicate balance between honoring their heritage, and adapting them to meet contemporary demands. The richness of a layered city depends on the recycling of historic buildings to nourish its evolving society, and longevity of such heritage structures depends on a critical material and design strategy. Launching from the premise that the greenest building is an existing one,[1] this paper presents a strategy for ensuring longevity in retrofitted heritage structures that looks beyond building performance to resilience in reuse and durability in character.

We can argue that the greenest building is not just an existing one, but a retrofitted existing one where climate change mitigation, material circularity and adaptability in occupation are key. Given the ubiquity of 19th and early 20th Century masonry structures in urbanized areas of Canada, it is incumbent upon us to design for longevity, adaptability, and recyclability.

In this pursuit, this paper examines specifically the capacity for interior architecture to be instrumental in the longevity of retrofitted heritage structures.

Three case studies adapting late 19th and early 20th Century masonry structures for new public, semipublic, and private uses will display clear strategies for longevity while also leveraging the rich imprint of this historic fabric. Critical to this work is understanding the capacity for interior and exterior retrofit elements to graduate the scale, use, and character without erasing the original heritage structure. Further, future proofing the building depends on optimizing flexible spaces, integrating sustainable technologies, and enhancing accessibility without compromising historical integrity. Finally, effective inside-out detailing builds-in overall resilience for an enduring, and adaptable architecture pivotal to less tangible aspects of character and durability as essential ingredients for creating dynamic buildings in the layered fabric of the city for the next generation.

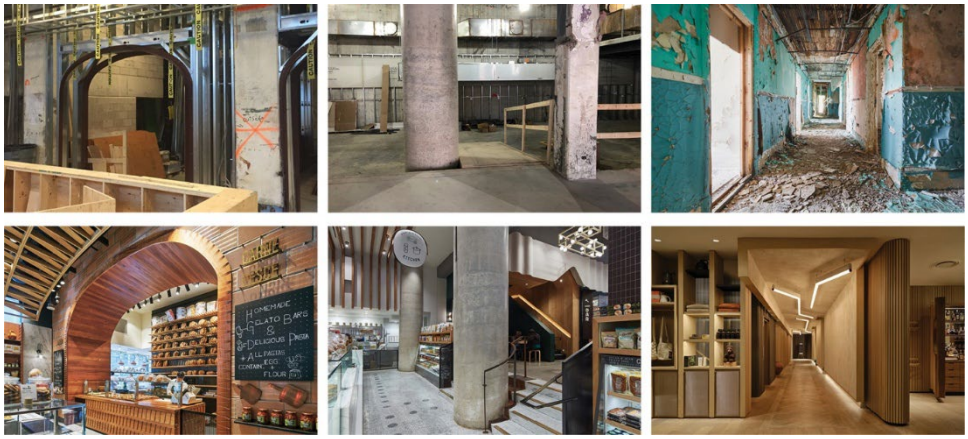

Figure 1. Three Case Studies demonstrate three different repurposed heritage conditions that nonetheless share an approach to utilizing interior architecture as a powerful tool for building new character, inseparable from the old one of its hosts.

IF
The greenest building is the one that's already built and retrofitted.
THEN
We must ensure its longevity as a thriving, engaged part of our urban fabric by going beyond building performance.
CAN
We look therefore to the capacity for interior architecture to build-in resilience in the form of flexibility, durability, and strong character to guarantee its best chance into the next generation.
Ultimately, retrofits will naturally have expiration dates too. Longevity, however, can also depend on a metaphysical durability, not only a physical one, achieved via a layered material 'dressing.' As per the writings of Godfried Semper, Adolf Loos, Mark Wigley, and others, this interior architecture can not only lend itself to but shape an evolving culture and use. Further, articulating the functional, technical, and material design of this discrete layer within a retrofitted heritage building is indispensable in ensuring its resilience in a rapidly changing world.

HERITAGE IN CONTEXT

Historic structures in Ontario deemed to have heritage value are protected under the *Ontario Heritage Act (OHA) Register*[2] that abides by an overarching criterion for "cultural heritage value or interest" published in the Canada-wide *Standards and Guidelines for the Conservation of Historic Places in Canada*.[3] The OHA Register includes statements of cultural heritage value or interest using descriptions of heritage attributes for each listed property, usually as evaluated by expert architects and historians. As a central repository of legal documents, notices, and approvals it provides a comprehensive, public database of all heritage properties designated under the Ontario Heritage Act, and in so doing it spreads awareness of heritage conservation in Ontario with accurate information and supporting rational for valuation of what is often referred to as "character-defining elements."[4]
Character-defining elements are unequivocally tied to heritage value as described in the *Standards and Guidelines for the Conservation of Historic Places in Canada*'s 14 General Standards "based on internationally recognized conservation principles."[5] Primary to the mandate of evaluating, documenting, and ultimately conserving heritage structures is to protect inherent heritage value of a historic place by not removing, replacing or substantially altering its intact or repairable character-defining elements.[6] The General Standards make clear that each historic place be recognized as a

physical record of its time, it should not be contaminated with elements from other places or time periods, and where possible, character-defining elements should be repaired rather than replaced.
At the same time, the second of the 14 General Standards asks however that we "conserve changes to a historic place that, over time, have become character-defining elements in their own right."[7] It is in this space of new building layers that accommodate and propel new purpose and building uses for a changing society where we find opportunity to build-in new meaning in the form of novel character-defining elements. The careful design of these new elements and features, often in the interior retrofit project, can ensure durability and lasting heritage value without erasing but rather registering and enhancing the original historic place.
This complementary process has the power to elevate the heritage value of the original. Building on what we have is important. It allows us to reap the benefits of the layered city, like that described by Italo Calvino:
"*The city, however, does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratings of the windows, the banisters of the steps, the antennae of the lightning rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls."*[8]
Embodied not only in old and new elements but in their contrast, societal values and culture become dynamic not fixed and not threatened by erasure.

THE SITE OF OPERATION

Not only is erasure throwing away heritage value and urban richness, but it is also counterproductive in mitigating the effects of climate change and in the effort to create resiliency, durability, and low carbon additions to the city.[9]
Most of the heritage protected historic places in Canada's Southern Ontario are turn of the century, urban, masonry typologies. While these heritage masonry structures are typically energy inefficient, replacing the robust building stock with new net-zero ones is unrealistic and carbon and energy expensive.[10] According to building scientists, the deep energy retrofitting of heritage masonry buildings is a key part of achieving a zero-carbon, energy-neutral future while maintaining our cultural and architectural heritage.[11]
Of this majority late 19th and early 20th Century masonry heritage buildings, most have little to no surviving interior character-defining elements (apart from civic and religious historic institutions.)

Figure 2. Case Study III_Shelled during the discovery and demolition stage where masonry facades of hertage value are supported, restored and repointed to a more glorious version of itself while the interior stair is deemed structurally compromised and unsalvageable.

It is important here to mention the critical process for successfully retrofitting a masonry heritage building via the rehabilitation of its envelope to optimize building performance. As outlined by Eric Charron, Randy Van Straaten and others, there are three primary considerations in this process.

1.Reducing Heat Loss
Replacing leaky seals, introducing thermal breaks, and replacing glazing systems as insulated units are key operations for reducing heat loss. All can be achieved with invisible effect on the original aspect of the building, especially by replicating vintage window frames and material aspects.
2.Moisture Management and Control
Moisture management is achieved primarily by deflection devices (flashing and overhangs,) drainage devices (weeping tiles, drainage mats, scuppers,) and drying devices (breathable paint on mortar and masonry, limiting rainwater entry, and vapour control.)
3.Interior Insulation
Heritage buildings should be insulated on the exterior below grade, and on the interior above grade in order not to interfere with the heritage aspects of its visible facades.[12]
Interior insulation in this case, as well as retrofitted building systems and technologies, necessarily creates a new surface, a kind of sartorial lining spaced from the building shell. This is the point of departure for the case of the strategic power of interior architecture in the retrofit of heritage buildings -- ultimately where retrofit of the building envelope ends and new interior architecture begins.

‘THE PRINCIPALS OF DRESSING’ NOW

Interior architecture, defined by Gotfried Semper as a conceptual veil, stems from the distinction coined by Karl Botticher between core-form (*Kernform*) referring to the material and static function of an architectural element and art-form (*Kunstform*) referring to the artistic and expressive dressing or overlay of that architectural element.[13] Key to this distinction is the understanding that interior architecture as art-form, as the conceptual veil defined by the four elements of textiles, ceramics, carpentry, and masonry[14] has the power to imbue character and cultural expression into an otherwise static architecture typology.
This is not a new argument and can be traced in subsequent works by Adolf Loos and his ‘Principals of Dressing,’[15] a material surface by which Mark Wigley launches his own analysis of the material cultural of the immaterial in *White Walls, Designer Dresses.*[16]
We find evidence in the Semperian 19th Century notion of the conceptual veil in 20th Century movements such as the layered retrofits of Carlo Scarpa where the reveal, a space between two elements or surfaces allows distinct, new meaning of both; and, in the work of Gio Ponti where the conceptual veil is now embedded as in the custom custom ceramic tile flooring, furniture walls and frameless doors that leave the host shell intact and continuous.

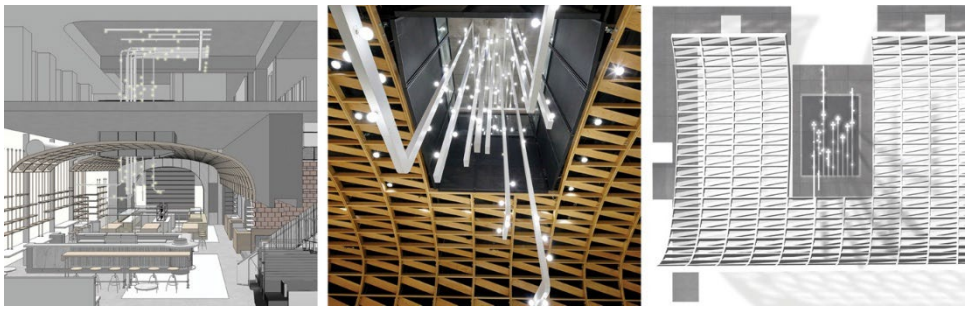

Figure 3. Distinct interior linings such as the solid oak ‘basket vault’ of SUD Forno (Case Study II _Transplanted) imaged here, inhabit the stripped interior of the relocated and repurposed 1912 Holt Renfrew Building.[17]

Whether embedded in its surface or revealed as an objectified surface distinct from the existing, older environment, strong character is achieved by empowering interior architecture to graduate the scale, the use, and the attitude of a heritage building without erasing the original.

RECIPE FOR LONGEVITY

Strong character, after all is one of the main ingredients for extending the life of a historic place. When matched with a strategic and resilient design approach, interior architecture is an instrument for longevity in heritage buildings – even when little to no original character-defining elements remain.
Key considerations, therefore, for durable design that goes beyond envelope and building performance, include:
1. Optimizing flexibility and enhancing accessibility. Interior architecture can effectively future proof its host structure by anticipating changes of use not yet imagined via a degree of convertibility of demising elements, along with a retrofit that removes physical and sensorial barriers for continued, universal accessibility.
2. Assuming building envelope has been rehabilitated using best practices, a considered interface of air and light using interior linings and elements can enhance building performance through shading, distribution, and access for maintenance. Interior architecture can effectively detail connections to the existing building to allow both to breathe – literally and figuratively.
3. Allowing degrees of temporality to inform the interior architecture where some material specifications and artifacts are strategically selected for their durability, or lack thereof. In this case, longevity depends on some aspects of the interior architecture to have a shorter lifespan and become ultimately replaced and layered with new character-building architectures in the future.
4. Anticipating which new elements that define the interior architecture, especially when read in contrast to the expressed / exposed spaces of its culturally valuable heritage building, will become in future character-defining elements in their own right.
These devices depend on a series of design operations to ensure the new architecture be instrumental in propelling the historic place as a thriving building into the next generation. These include:
Contextualizing inherent evidence of the base building's site, neighbourhood, building typology, and previous use.
Recovering heritage elements to be protected from memory loss either as a relic, as a ghost, or as an abstraction.
Curating a new, accessible and inclusive program of use for dedicated and non-dedicated spaces, instilling future flexibility, while weaving its story and character.
Layering an interior architecture where each element is visibly spaced from the vintage structure and from each other, for access, for productive contrasts, and for future selective renovation.
Specifying a material palette that considers durability as well as temporality as inseparable from cultural expression of the here and now.
Imagining future stories.

CASE STUDIES

Three case studies, each representing a typical category of retrofitted heritage structures in Southern Ontario, test this design strategy to empower interior architecture as an instrument for longevity. All three urban, main street masonry buildings have been retrofitted by rehabilitating building envelopes and primed to receive a dynamic, layered interior that can together with restored and heightened cultural aspects of the original, build-in strong character for a new use.
The first case study repurposes a 1930's postal station on Yonge Street in mid-town Toronto. Although all interior heritage elements here were all but demolished, the stone facades and concrete

structure is firmly intact. Postal Station K displays a rare example of Canadian iconography on its façade and is, apart from the building, a site of national historic significance.[18]
The second case study occupies a transplanted masonry heritage department store. The original turn of the century Holt Renfrew building's four facades were meticulously disassembled then reassembled one city block north. In addition, a few bays were created to ghost and extend the original to accommodate building services. Needless to say, the interior structure was completely stripped to make way for new, contemporary building technology.
The third case study resuscitates an 1879 old Railway Hotel on Main Street in Picton, Ontario. The derelict state of the building rendered its interior structure unsalvageable, and the building was shelled to keep and restore its three primary facades while retrofitting the interior structure and building systems to meet new environmental standards.

Figure 4. Three Case Studies designed by Giannone Petricone Architects, Toronto left to right: I_INTACT_Postal Station K, 1936. Location: Toronto, Ontario Heritage Consultant: ERA Architects, Base Building Architect: RAW Architects. II_TRANSPLANTED_ Holt Renfrew Building, 1912. Location: Toronto, Ontario Heritage Consultant: ERA Architects, Base Building Architect: KPMB Architects. III_SHELLED_ The Royal Hotel, 1879. Location: Picton, Ontario Heritage Consultant: ERA Architects, Base Building Architect: Giannone Petricone Architects

Case Study I – Intact

Described as Intact, Case Study I reimagines a heritage protected Government of Canada Postal Station, purpose-built in the 1930's, now decommissioned and surgically anchored by an adjacent residential development. Character-defining interior elements such as the coffered ceiling and banks of wickets were long removed for construction access, decades of use, new thermal insulation, and rehabilitation of heritage protected masonry shell.[19] The interior has been retrofitted to accommodate a kind of food emporium. Strategic operations for Case Study I:

Contextualizing

Urban Order and Elements: Original 1935 Canadian stone icons, front façade centre stair, centre hall contrasted with new order of universally accessible elements

Recovering

Contents: Wickets, Floor, Coffer, Stairwells, Windows, Awnings, Cornice

Curating

A Theatre of Food: Prosceniums, Stage, Back Stage, Orchestra (of kitchens,) Crossover, Wings

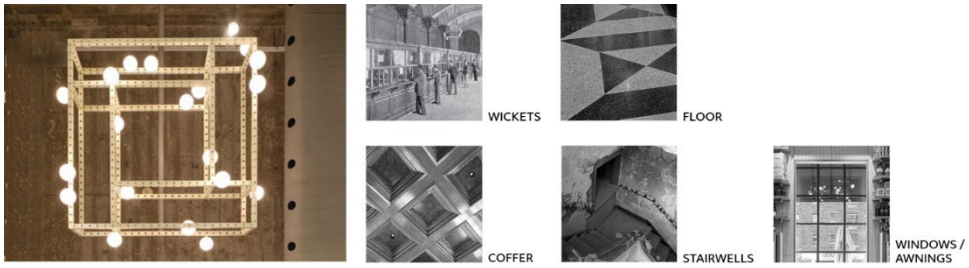

Figure 5. Case Study I _Intact. Recovery of long-gone, character-defining elements in the form of now abstracted postal wickets, institutional stairwells, windows/awnings on the public square, recovered terrazzo floor, and custom designed chandeliers as ghosted coffers.

Case Study II

Described as Transplanted, Case Study II reinhabits the meticulously disassembled, relocated, then reassembled Holt Renfrew Department Store building originally built in 1912. While all defining aspects of the detailed masonry facades, stone cornices, and lead storefronts were restored, none of the original interior aspects of the heritage protected building made the journey.

Contextualizing

Urban Order and Elements: Yonge Street storefronts, masonry returns, sidewalk recesses, participation in a heritage gateway along lower Yonge Street[20]

Recovering

Contents: Shop Window, Lead Motifs, Atrium, Deep Surroundings, Display

Curating

An Adoration of Bread: Vault, Apse, Nave, Altar Gallery, Confessionals, Organ Gallery

Figure 6. Case Study II _Transplanted. Recovery of long-gone, character-defining elements in the form of now abstracted, rear view of shop windows, reinstated atrium with chandelier, custom displays, and counter lights with restored façade motif that is repeated in lead, pewter, and wood to culturally embellish interior organizing elements.

Case Study III – Shelled

Described as Shelled, Case Study III resuscitates the abandoned Royal Hotel built in 1879 in Picton, Ontario, the seed of Prince Edward County. While treasured and protected as an important example of the string of railway hotels in the Victorian Mercantile style,[21] the building structure was condemned and deemed unsalvageable. The south (front) façade, the east and west facades, and part of the rear façade were meticulously restored while replacing all building systems to meet contemporary standards and anticipate evolving needs.

Contextualizing
Urban Order and Elements: Main Street Heritage District, urban street wall versus rear precinct[22]

Recovering
Contents: Cage, Balustrade, Rosettes, Textiles, Mantles, Paneling, and Porch

Curating
A Royal Contrast: Street to Garden, Parlour to Library, Counter to Dining Room, Pool to Suite

Figure 7. Case Study III _Shelled. Recovery of long-gone, character-defining elements in the form of now abstracted, Victorian paneling, textiles/motifs, and decorative elevator cage, along with a reinstated exterior balustrade, as well as rippled ceiling rosettes recalling the once water-logged building and the monumental underside of a mushroom above the dining room.

Material Character
The final operations cannot be separated from each other. They overlap to create a distinct and defining material character.

Material
Layering, specifying, and detailing become together devices for registering time, anticipating change, and defining an enduring distinct character.

With
Layering comes contrast where distinct strata of new and existing selectively conceal and reveal the host structure and each other. The space between layers gives at once access ‘behind the walls and ceilings’ and later, opportunities for selective alteration.

With
Specifications comes cultural specificity, degrees of durability, idiosyncrasies, and sometimes unexpected ornament.

Figure 8. What was the Victorian mantle now consumes the fireplace at the exterior masonry wall whose interior lining in the form of a plaster or wood ribbed "veil" pulls away from the host masonry shell to furl and envelop the projecting hearth

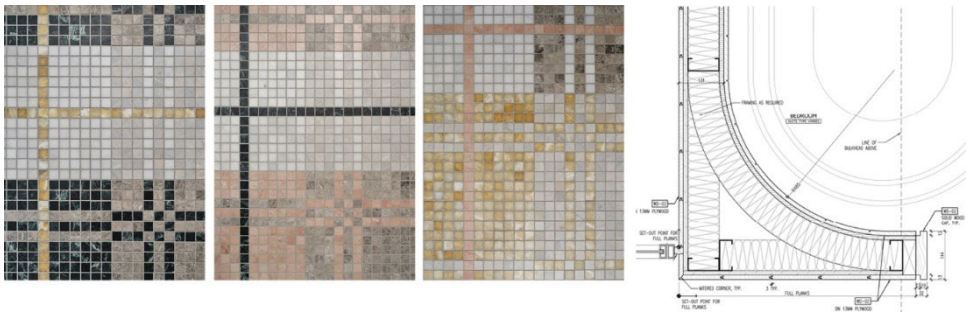

Figure 9. Three custom mosaic tile patterns (that echo exterior, restored masonry colours) are rendered as petrified, Victorian tartan textiles and lay as inlayed aprons, as scars from an imagined previous occupation in the oak wood floors.

Figure 10. The quintessential Victorian ceiling rosette is substituted with an abstracted mushroom that lands the dining room below it eccentrically while distancing its cultural association from the British Empire Loyalists to the agrarian Prince Edward County context.

CONCLUSION

The speculation that interior architecture has the capacity to be an instrument for longevity in heritage structures launches from certain assumptions. First, that meaning and cultural value in heritage structures depends on strong character and its defining elements. The second is that restoration, or repair of original character-defining elements alone is insufficient to carry heritage value into the next generation; rather, new elements, sometimes in the form of abstraction, and the powerful contrast between them is requisite.

Further, incumbent upon the interior architecture is to extend best practices in the retrofit of heritage building shells and to build-in resiliency, durability, and low carbon additions to the city. To do this, a series of tectonic operations must be executed in-parallel to character-building operations.
Specifically, retrofitting an architecture for universal accessibility, optimized flexibility of spatial elements, and a strategic combination of short-term and long-term elements and surfaces are designed alongside less tangible but no less powerful cultural operations. These include contextualizing its urban condition and building typology, recovering now gone character-defining elements, and curating a familiar narrative that nudges old meaning towards a new use and new culture.
These also include two critical operations of layering new elements with the old of their host and strategically specifying new materials for degrees of endurance and degrees of contrast. One operation depends heavily on the other, and each cross both tectonic and cultural directives in pursuit of a durability that goes beyond building performance to imagine a future of new stories.

NOTES

[1] Robert Adam, "'The Greenest Building Is the One That Already Exists,'" *The Architects' Journal,* August 13, 2021, https://www.architectsjournal.co.uk/news/opinion/the-greenest-building-is-the-one-that-already-exists.
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SUSTAINABLE DEVELOPMENT PRINCIPLES FOR HISTORICAL RURAL SETTLEMENTS CLOSE TO HIGHWAYS: THE CASE OF URLA PENINSULA, IZMIR

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INTRODUCTION

Rural development can be inevitable and essential to the global economy and sustainable development worldwide. As rural landscapes have started to face rapid developments like the urban centers, some risks appear regarding the recession in rural production and changes in the population.[1] Due to internal and external factors, some rural landscapes in the Urla district of Izmir have shown immense growth over the last decades. Although rural developments are not inherently dangerous for the landscape, the growth in the villages of Urla has happened without much control and damaged the historic settlements to a certain extent in terms of physical environment, socio-cultural, and economic aspects.

Uncontrolled growth and gentrification processes in rural landscapes differ from those in urban areas. Although both usually occur by middle and upper-class citizens, the motivation for moving to the rural lies in a desire for a slower lifestyle instead of the bustling city life of the urban.[2] However, in the case of Urla, the slower lifestyle understanding is not the only motivation as the historical villages of Urla are also affected by population growth and development due to its proximity to popular tourist centers such as Çeşme, the opening of different educational facilities[3] which increased the presence of young population,[4] the global pandemic[5] (Covid-19) and the damages caused by the earthquakes in Izmir city center in 2020.[6]

The construction of highway networks between urban and rural areas of Izmir is another important factor triggering urban growth and fringe development. In this context, a key driver affecting Urla villages is the Izmir-Çeşme highway, which began construction in 1989 and became operational in the 1990s. The introduction of the Izmir-Çeşme Highway and its branches have encouraged rapid development in and around the historic rural villages. This axis has led to urban sprawl, the opening of forest and agricultural lands for construction, intensive building activity, and population growth in rural areas.[7] Urban sprawl is especially pronounced in areas located close to highway exits,[8] as seen in and around nearby historic villages in Urla.

This research aims to examine the transformations of historic rural settlements close to highways in the context of the Urla peninsula. It also aims to understand and discuss how rural growth can be managed to conserve the historic built environment by providing a framework for principles in sustainable rural development.

MATERIALS AND METHODOLOGY

Based on the argument that conversion is more severe in settlements located near highway exits, this research examines the transformations around the Izmir-Çeşme highway in the context of development in historic rural centers. From this point of view, the focus is on three historic rural settlements that have experienced different kinds of changes due to the strong influence of highways on land transformation. The historical rural settlements of Yağcılar, located to the south of the Karaburun exit, Gülbahçe, located to the north, and Özbek, located to the north of the Urla exit, were examined in this context (Figure 1). Although Urla is a historic settlement close to the highway exit, it is not included in the case studies as this research focuses on small-scale villages, while Urla has been a significant district center for centuries.

Figure 1. Historical villages near the highway exit and arteries in the Urla District (Google Earth).

To provide a background for the fieldwork, the research conducted a literature survey on historical rural settlements, their transformations, and the effects of highways and urbanization on cultural heritage sites. The transformations observed in and around these three historical rural settlements are analyzed in physical and socio-cultural contexts. The physical transformation is identified through field surveys and aerial photographs that enable comparisons between past and present. The area map of 1975 provided by the General Directorate of Mapping and the current area maps obtained from Google Earth were used to compare the past and present situation on the map through spatial differences in land use. Additionally, socio-cultural transformations are revealed through TurkStat data, on-site observations, and interviews conducted in the field. TurkStat data was used to analyze demographic trends to understand population changes. On-site observations included assessments of physical changes in the environment dynamics; in this context, historic structures, new buildings, and the direction of urban expansion over agricultural lands were examined. The interviews helped to

understand these physical transformations through the perceptions, experiences, and challenges faced by the local population.

The methodology helps to understand the current context, which will be used for the research to develop a framework that includes elements of rural planning, environmental sustainability, cultural and natural heritage protection, and community engagement to establish sustainable conservation and development principles (Figure 2).

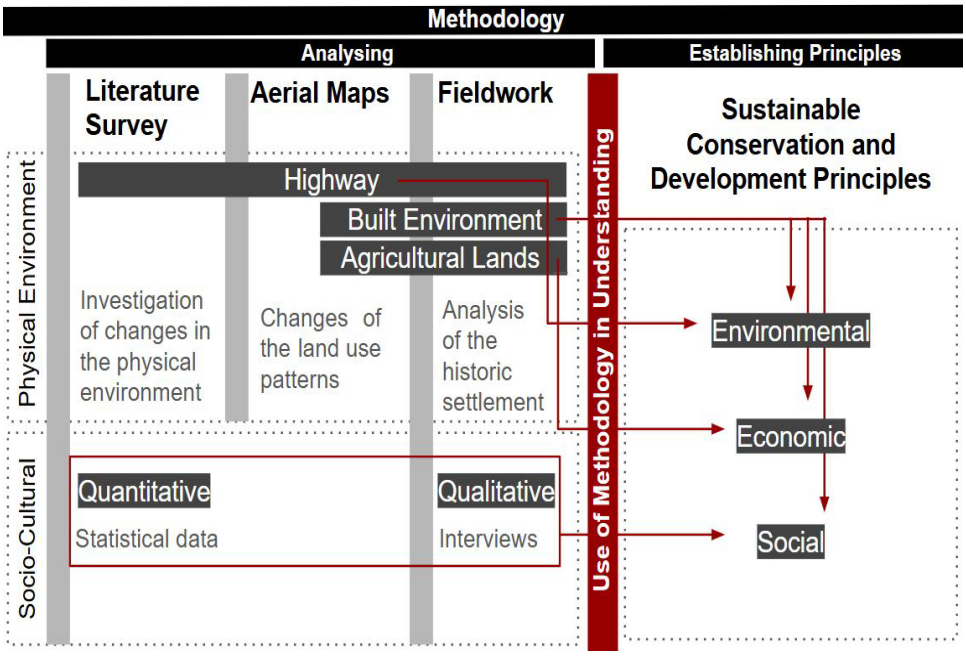

Figure 2. Methodology of research

RESULTS AND DISCUSSION

This chapter examines the transformations of three historical rural settlements located around the Izmir-Çeşme highway. Although there are common factors in the transformation of these settlements, such as the construction of a highway, earthquake, and pandemic, the main causes and consequences of the transformation are location-specific and differ from each other (Figure 3). In parallel with this, the population growth rates of settlements and the impact of population growth on the historic fabric and rural landscape also differ (Figure 4).

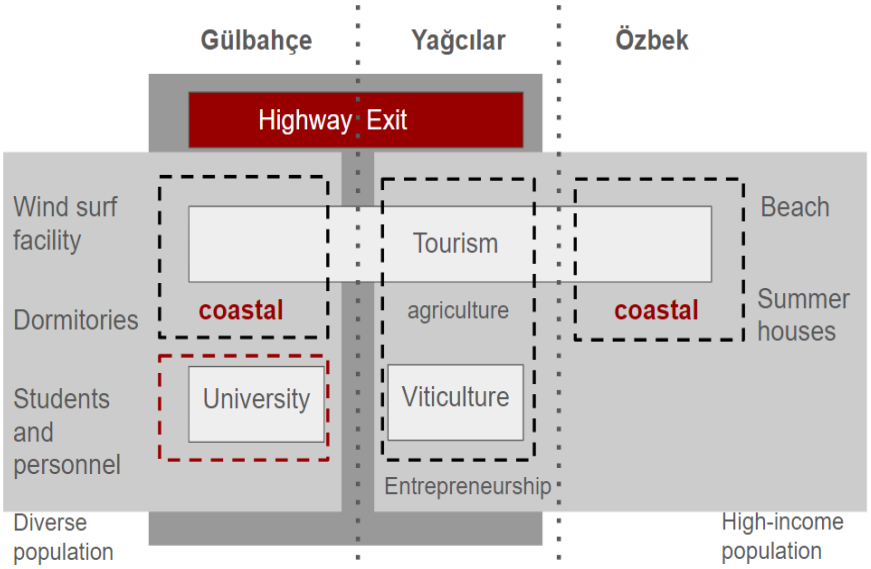

Figure 3. Drivers of transformation

	Loss of Agricultural Lands within 1 km radius of the village	Loss of Historical Tissue within the village	Population (with the current value)	Growth in Population for the last 10 years
Gülbahçe	X	X	X (6200)	114%
Yağcılar	X	X	(550)	8%
Özbek			X (1600)	40%
			Urla (Total)	37%

TurkStat Data, 2023

Figure 4. The impact of population growth on historical tissue and rural landscape (TurkStat Data, 2023)

Gülbahçe

Gülbahçe is a rural settlement located in the north of the Urla Peninsula, approximately 5 km from the Karaburun exit of the Izmir-Çeşme highway. With a history dating back to ancient times, it carries significant tangible assets and cultural heritage that bear witness to this historical process to the present day.[9]

Gülbahçe, renowned for its historical and rural character, is at risk of losing its distinct rural identity due to rapid migration and uncontrolled population growth. Key factors contributing to this issue include the construction of a highway in the 1990s and the subsequent establishment of a university in 1992, located approximately 1.5 km southwest of the settlement. These developments led to the

emergence of a student demographic in the region, which has grown significantly since 2007, according to the earliest TurkStad[10] data. Furthermore, the population growth rate has accelerated since 2020, driven by the migration of urban residents to rural areas following the Izmir earthquake on October 30, 2020, and the global pandemic.

These developments have increased the housing demand in Gülbahçe from both university students and staff, as well as urban dwellers seeking a peaceful and safe life in rural areas. The 1975 aerial photograph reveals that the settlement was confined to a small area with extensive agricultural lands surrounding it. In contrast, the current map illustrates a significant reduction in agricultural lands, an increase in construction activities, and a northward expansion of the settlement both around the center and along the coast (Figure 5). This is an important factor in the loss of the rural character of the settlement, the changes in the population, and the change in the production habits of the local community, which has shifted from agriculture to the service sector.

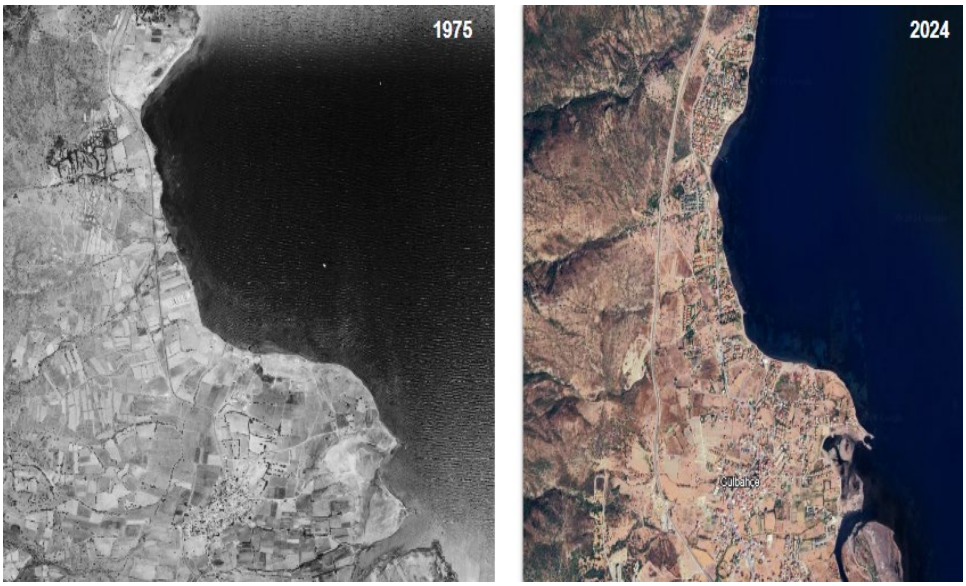

Figure 5. The transformation of agricultural lands into residential areas along the coastline in Gülbahçe village (Area map from 1975 obtained by General Directorate of Mapping; current condition from Google Earth).

The increase in construction threatens not only agricultural lands and rural landscapes but also built heritage. The rapid transformation within the settlement has led to the demolition of historic buildings and the construction of new structures that are incompatible with the historical fabric, aimed at meeting the increasing demand for housing and generating profit (Figure 6). Measures should be taken against these dense, unplanned, and unqualified constructions in order to protect the rural and historical characteristics of Gülbahçe rural settlement and, thus, its cultural and natural values.

Figure 6. An example shows the difference between a historical and a new structure in Gülbahçe Village. (Images by Authors, 2024).

Yağcılar

Yağcılar is located in the south of the Urla peninsula, about 4 km from the southern exit of the highway. It is a rural settlement with historical qualities whose inhabitants came from Thessaloniki during the population exchange in the 1920s.[11] It is a small village with an organic settlement pattern, surrounded by farmland.

Unlike Gülbahçe and Özbek, there is no excessive population growth in Yağcılar. The main factor transforming the historical fabric and rural life is gentrification. In Yağcılar, where high-income urban dwellers have settled, new houses were predominantly built on the village periphery and on agricultural lands to the east, which is observed when comparing maps from 1975 and 2024 (Figure 7). The newly constructed buildings consist of gated luxury residential complexes and individual houses that do not conform to the original building typology, which has been extensively lost today.

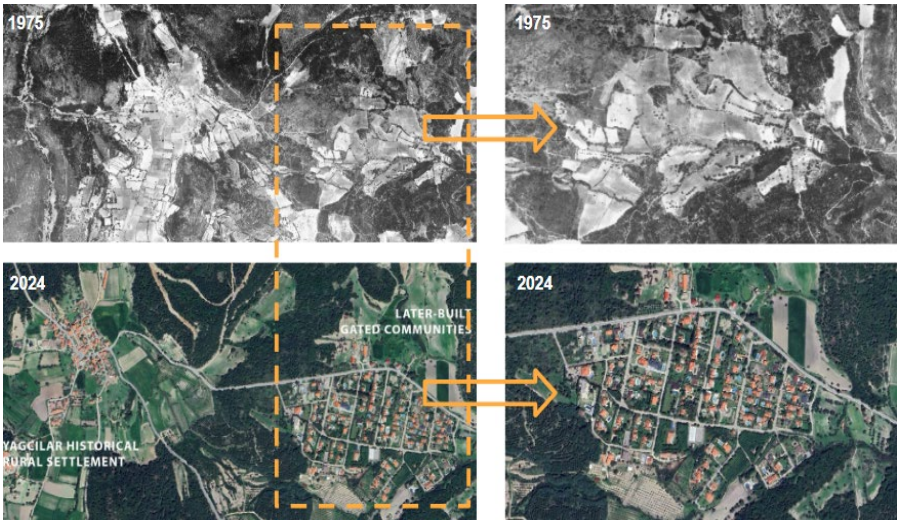

Figure 7. The difference in scale and land use between the historic village and the new residential areas of Yağcılar (Area map from 1975 obtained by General Directorate of Mapping; current condition from Google Earth).

Another factor triggering gentrification in Yağcılar is the viticulture activities carried out by urbanites and the wine houses that have opened in the region, catering to the middle and upper-income groups. These developments are transforming Yağcılar into an agro-touristic and culinary settlement. In this context, it can be said that local production and agricultural lands started to be owned by urban investors. Therefore, it is necessary to take measures against gentrification and the shift in production ownership.

Özbek

Özbek Village is a rural settlement located approximately 10 km north of the Urla exit of the highway and dates back to the 14th century.[12] The settlement has an organic pattern and is surrounded by agricultural lands.

In Özbek, rapid population growth can be attributed to coastal tourism and summer houses built along the coast. The village center is located approximately 2 km inland from the coast. Therefore, compared to Gülbahçe and Yağcılar, the historical settlement area of Özbek has undergone less change, preserving its natural, cultural, and historical fabric (Figure 8). The new residences built in the inland part of Özbek village have been comparably constructed in a modest manner to respond to the needs of the local community.

Figure 8. Özbek rural settlement has expanded around the center since 1975, but agricultural land has been largely preserved (Area map from 1975 obtained by General Directorate of Mapping; current condition from Google Earth).

On the other hand, the main transformation is taking place along the coastline. On the coastal strip, where tourism is influential, grid-plan rows of houses resembling an American suburban pattern have been built in contrast to the organic layout of the village center (Figure 9).

Figure 9. The historic village of Özbek follows an organic settlement pattern based on topography and natural elements, while the new housing areas along the coastline imitate an American suburban pattern (Google Earth).

SUSTAINABLE DEVELOPMENT PRINCIPLES FOR GULBAHCE, ÖZBEK, AND YAGCILAR HISTORICAL RURAL SETTLEMENTS

Sustainable rural development aims to eradicate poverty, ensure sustainable production and consumption, and protect natural resources and ecosystems, in addition to focusing on challenges in economic, environmental, and social dimensions.[13] Local cultural heritage has significant potential and opportunities to achieve these goals.[14] In this context, the study attempts to explore these potentials and opportunities to develop principles of conservation and sustainable development focused on rural cultural heritage through the cases of Gulbahce, Yagcilar, and Ozbek. Despite their differences in drivers and impacts of development, they are susceptible to rapid and uncontrolled changes, resulting in the loss of land, lifestyle, and traditional patterns.

The principles developed in these rural contexts are based on the three main aspects of sustainability, namely environmental, economic, and social. The purpose of the established principles is to maintain the natural and built rural character, local production habits, and socio-cultural values against the transformative effect of the highway.

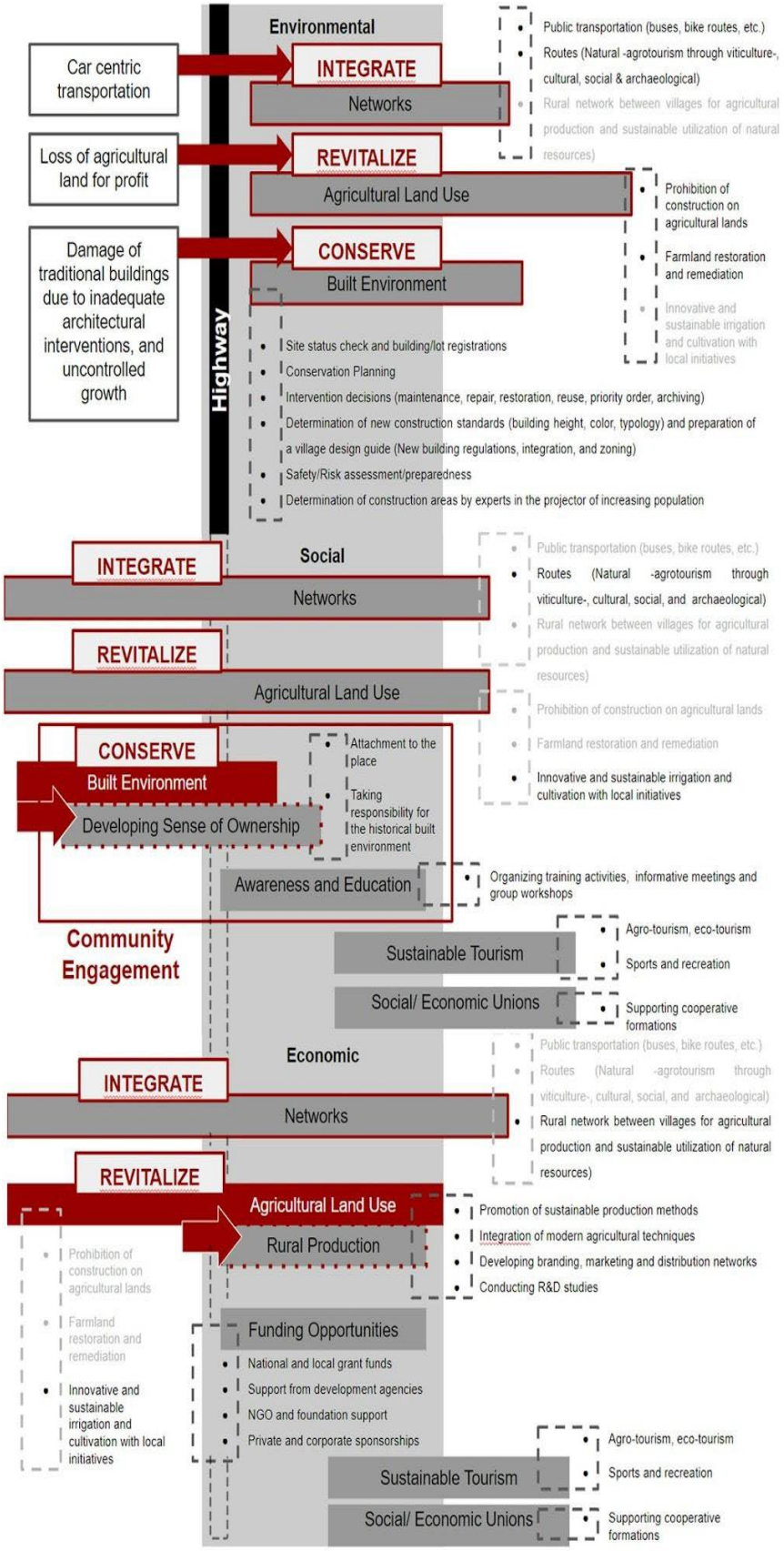

Figure 10. Principles for sustainable development in historic rural settlements.

For this purpose, the proposed principles have been developed with a focus on the concepts of integration, revitalization, and conservation. The integration is required for the nature and culture of the rural settlements, which have been divided mainly by the highway and include suggestions for networks, while the revitalization is essential for agricultural landscapes and the changes in land uses. Lastly, the conservation of the historical settlement is crucial in preserving the identity of the place, and the principle pertains to all kinds of built environments (Figure 10).

Environmental Principles

The highway is a car-centric and transformative element. On the other hand, it holds the potential for integration. In this context, it is recommended to ensure the integration of local networks with the highway, to develop public transportation (buses, pedestrian paths, bicycle paths), and to establish natural agrotourism through viticulture, cultural, social, and archaeological routes. The main challenge in land use in the environmental context is the development of agricultural land for profit. At this point, encouraging the revitalization of agricultural land use is an important issue. In this regard, it is recommended that construction on agricultural lands be prohibited and that agricultural lands be restored and improved. Especially in the case of Gulbahce, this is a critical situation and should be addressed as a priority. Another important principle is the preservation of historic buildings damaged by rapid and uncontrolled growth and unconscious interventions. Under this principle, it is proposed to check the site condition and building registers, carry out conservation planning, develop intervention decisions (maintenance, repair, restoration, reuse, prioritization, archiving), set new building standards (building height, color, typology) and prepare a village design guide (new building regulations, integration, and zoning), carry out safety/risk assessment/preparation, and have experts identify areas for construction in the light of the growing population.

Social Principles

The creation of natural/agrotourism through viticultural, cultural, social, and archaeological routes proposed in environmental recommendations also function as social and community routes. The principle of revitalizing agricultural land use suggests that the community take the initiative for innovative and sustainable irrigation and cultivation. The principle of conserving the built environment is important for preserving community identity and strengthening a sense of belonging to the place. In this context, it is recommended to enhance attachment to place and foster a sense of responsibility for historical built environments. These recommendations can be achieved by increasing awareness and education levels within the community by organizing educational activities, holding informative meetings, and conducting group workshops suggested for this purpose.

Economic Principles

To ensure the integration of networks in an economic context, it is recommended to establish a rural network between villages for agricultural production and sustainable utilization of natural resources. To revitalize agricultural land use, promoting rural production is essential. Therefore, promoting sustainable production methods, integrating modern agricultural techniques, developing branding, marketing, and distribution networks, and conducting R&D studies are among the economic principles. In addition, funding opportunities are an important input for the continuity of production. It is recommended to apply for national and local funding, seek support from development agencies, NGOs, and associations, and look for private and corporate sponsors.

Rural cultural heritage presents a significant opportunity due to its potential for sustainable tourism. This is crucial both for social and economic development. In this context, recommendations include exploring agro-tourism and eco-tourism opportunities, as well as creating sports and recreation

facilities. It is also recommended to encourage the establishment of social and economic co-operatives.

CONCLUSION

As a result of the rapid and uncontrolled changes over the years, many qualities existing in the historic settlements have been negatively affected. Even though the rural landscape has lost some of its qualities, there are still steps that can be taken and values that can be preserved. The values of the rural landscape should be evaluated in line with the needs of the villages without losing its significance. Rather than new constructions, the existing traditional housing stock can be restored, or various criteria can be established for new constructions. Encouraging reverse migration can also be considered. Reducing poverty and inequality while building social capital is the critical approach to rural development.[15] Local producers in the villages should be incentivized to produce, and animal husbandry should be supported instead of the service sector.

The local community and the facilities can further act together to create new values since social and economic collaborations that reinforce both science and education, as well as sustainable rural development, would be ideal for the revitalization. New facilities can extend towards the villages with compatible designs to further interact with the local community. Lastly, better public transportation, which eliminates high-speed cars, can also be encouraged as it is currently challenging to move within the landscape due to the rushed infrastructure. Although these changes are challenging to realize, they should be supported and prioritized for a more sustainable development. Therefore, the necessity of raising this awareness in order to preserve the historic settlements has been expressed in this paper to encourage and call for a positive change through a comprehensive framework.

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EXPOSURE AND VULNERABILITY AS METHODS OF ARTISTIC RESEARCH

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PARADIGMATIC CHANGES

The Institute of Architecture (IfA) at TU Berlin is currently undergoing a significant systemic paradigm shift in its teaching and understanding of research. At the conference "REASSEMBLE, REGENERATE, REFRAME" at the IfA in February 2024, against the backdrop of climate change, natural disasters and the "Bauwende" discussed in the German context, the question was raised as to what extent architectural education and research must change in order to meet the challenge of creating sustainable and equitable livelihoods.[1] In relation to the field of educational research, the conference developed a series of proposals that set the task of developing critical research formats that can integrate flexibility, openness and change. Business as usual is not an option. In the following, I would like to highlight for the Amps conference an approach to artistic research that we have pursued at the Chair of Visual Arts, which brings this dynamic into play on a small scale and which I believe can make an important contribution to this paradigm shift within educational research in the wider field of architecture and urban futures.

STUBBORN PLACES

The title of the seminar is “Eigensinnige Orte” in German, “Stubborn Places” in English, and refers to places that seem to have a mind of their own. Regardless of whether a place is described as stubborn or “eigensinnig”, we understand the title as a synonym for the effect of a place, i.e. whether it can be perceived as generous or deviant, inviting or repulsive. However, the anthropomorphic connotations are not accidental, as we actually had a kind of anthropomorphic exchange in mind, at least as a possible epistemic outcome of the student projects.

In 2022, Katrin Wegemann (project management) and Alex Gross (theoretical conception) received a grant from the STiL Foundation for Innovation in University Teaching to develop and implement a series of seminars at Prof. Stefanie Bürkle's Chair of Visual Arts. Our partly post-coronal teaching format consisted of students traveling to locations in Europe to conduct artistic research using the medium of film. The protagonist of each student project was to be a very special place. In the following, I will present the ideas I developed for the funded project as a theoretical concept around the notions of 'exposure' and 'vulnerability', based on a continuation of my PhD thesis.

CURIOSITY

The theoretical starting point of the course was curiosity, or the idea that curiosity can help us to really listen to what surrounds us. This concept of exploratory behavior should be reconsidered with the aim of creating new narratives and perspectives. But how do you listen, how do you tune into one place and the other in general? It requires a certain amount of exposure, openness and even vulnerability. Karen Barad writes in a study that confirms this openness: “It is making an invitation to the other to respond by putting oneself at risk and doing the work it takes to really enable a response.”[2]

In our case, it is a knowledge that arises from the fact that we are really there and take the risk of listening to the other while we are filming. By using the medium of film and performance, another act of focusing took place. “Zooming in from the landscape to a place also puts a decisive focus on the concept of action or on actions that cause a place to become apparent, for example in its spatiality or materiality.”[3] The result of the course was 30 very open and diverse collaborative approaches to artistic research with the medium of film.

Figure 10. “Silbersee”, Dora Joppien, Isis Bregonje, and Juli Bron, 2023, Chair of Visual Arts (IfA) 1

SILVER LAKES AND TROPICAL ISLANDS

Sometimes a place can seem almost repulsive. A place that is not only uninhabitable from a human perspective attracted a group of students from Denmark, Switzerland and Germany to an anthropogenic landscape in Saxony-Anhalt. They chose the Silbersee in Bitterfeld-Wolfen, a place with a long history of chemical hazards and pollution, as the protagonist of their research.

For years, chemicals and toxic waste from a GDR film factory were dumped into the lake until the color of the water surface gave the lake its name. Attempts were made to clean the water or fill the lake with soil. All failed and the lake's toxic surroundings were fenced off. The group could not go in and was not given permission to film because it was too dangerous. The film consists partly of attempts to walk around the site without being able to enter it, and partly of an attempt to invite the lake's features into another place.

Figure 11. “Silbersee”, Dora Joppien, Isis Bregonje, and Juli Bron, 2023, Chair of Visual Arts (IfA) 2

The only access to the experience of the real lake is the memory of a resident of Wolfen whom they had interviewed. He talks off the cuff about his childhood when the lake was already poisoned and about the failed attempts to renaturalize the lake after the fall of the Berlin Wall. For the pupils, the history of the lake can only be experienced by listening. As they were not allowed to enter the lake, they decided to encounter the place through a sculptural re-enactment of the process that is so significant to the lake’s history: “dredging and filling”.[4]
For most of the student groups, the choice of location was linked to a critical approach, which - unsurprisingly - led to moments of spatial rejection.

Figure 12. “Silbersee”, Dora Joppien, Isis Bregonje, and Juli Bron, 2023, Chair of Visual Arts (IfA) 3

Another group had a challenge to Eurocentric aesthetics in mind and entered the lion's den. In the winter of 2022, the three students, two of whom are from Mexico, decided to explore “Tropical Island”, an artificial leisure facility in a hall where cargo airships used to be developed. Filming inside was only possible with a smartphone. Filming from outside was made more difficult by the harsh winter weather. On the day of their stay, the students were confronted with an exotic otherness, which they describe as an “obscene potpourri of everything that doesn’t belong to Germany or Europe”.[5]

Figure 13. "EXOTIC OTHERNESS", Vani Monjaraz, Eva Sánchez Álvarez, and Inés Vachez, 2023, Chair of Visual Arts (IfA) 4

They found a wild mixture of artificial stones and worlds, some of which were reminiscent of South America and others of Asia. In addition to iguanas and parrots in cages and a Thai beach bar, there was also a store selling tacos and noodles. Everything seemed strange to the two women from Mexico. Animals that they knew as natural species living in the urban landscape of Mexico City were sold here as exotic.

The video shows a moment of critical self-reflection during their first encounter with this place. As critics, they expose themselves to this Eurocentric exotic otherness, narrated by the voice of a Mexican woman off-screen.

Figure 14. "EXOTIC OTHERNESS", Vani Monjaraz, Eva Sánchez Álvarez, and Inés Vachez, 2023, Chair of Visual Arts (IfA) 5

We see two very different approaches to opening up to a place that is closed and extremely difficult to enter. Hiding behind barriers and fences, exposing oneself to a place, has nothing to do with whether the place is inviting. It's just about inviting the place in and being curious to listen to it. It is a kind of transfer, not a one-way street, to invite Bitterfeld-Wolfen into one's own private living space or to

expose one's own cultural body in order to question a Eurocentric aesthetic of the exotic that has become the place.

MUDDY FOUNDATIONS AND CONTAMINATED DISCOURSES ON EXPOSURE AND VULNERABILITY

The first thing to say is that the idea of bringing vulnerability into a place exploration seminar has nothing to do with anyone getting hurt. No one should drink dirty water, drown in a muddy pit, or be injured by any other harsh environment. The concept of vulnerability is also not understood here as the opposite of resilience, as a classical understanding of behavioral psychology would suggest. In the seminars, the concept of exposure and vulnerability in the field of artistic spatial research is primarily about an ontological experience in order to enter into resonance with the various instances and layers of a place. Even if we hope for a further sensitization with regard to a larger picture, everything begins with a transfer, a being touched while touching.

Another transference could also be an anthropomorphic transfer. By anthropomorphizing a place, for example by perceiving it as generous or stubborn and looking at it anew, the chance of an exchange opens up, the chance to become a place in exchange, to be permeated by it. Tim Ingold's writing describes a kind of “anthropomorphic transfer in exchange” in relation to indigenous ontologies, which can also be understood as education.[6]

Jane Bennett, who represents a feminist neo-materialist approach, sees an anthropomorphic exchange as a possible basis for the development of green materialism when she says: “Maybe it is worth running the risk associated with anthropomorphizing […] because it, oddly enough, works against anthropocentrism: a chord is struck between person and thing, and I am no longer above or outside a nonhuman ‘environment’.”[7] We breathe the place, eat and digest it, have it in our bodies, are stung by it.

THEORY AND PRACTICE

The interweaving of aesthetic theory and practice in knowledge production, whether artistic or not, always involves a paradox. While this is familiar to artists and architects, philosophical and aesthetic theories often lack an intrinsic practical experience to which they can be attuned.[8] To theoretically justify the ontological approach of artistic research, it makes sense to engage with those rare discourses that move in the “immersed levels between aesthetic theory and artistic research,” which Knut Ebeling, following Jean-Noel Vournet, calls "impure discourses".[9]

The theoretical foundation of the course is essentially an assemblage of these impure aesthetic discourses, combined with insights from new materialisms and contemporary anthropology.

Central to all Theories were an understanding of material as active. Moreover, in line with the materialist turn, material is seen as agency, pulsating, vibrant, alive- one might say with a mind of its own. This understanding of material connects directly to recent theories of exposure and vulnerability within neo-materialist feminist discourses.

Donna Harraway's essay on artistic-scientific activism[10] Stacy Alaimo’s posthumanist, ecofeminist approach on exposure[11] or Jane Bennett’s reflections on the hoarder and the hoard[12] each address these issues in distinct ways, questioning anthropocentrism and rigid dualisms.

Another compelling example of an impure discourse, dating back to 1937, is the work of the surrealist secret society Acéphale in relation to Georges Bataille’s post-anthropocentric materialism.

Their nocturnal Recontres in a forest near Paris, represent a visionary moment in the history of artistic research.[13] In Bataille's understanding, the idea of exposure and vulnerability can be found, for example, in his concept of the labyrinth and of communication. He affirms dramatization and

contestation as operations of un-learning, what Bataille calls “non-savoir”[14]. In the most important moment of Acéphale, he explains that the only way to understand the place is to lose oneself in it.[15]
Connecting to the idea of the labyrinthine ontologies, anthropologists like Tim Ingold and Philippe Descola offer insights into indigenous ontologies, emphasizing intuition and correspondence with the environment. While these are not directly transferable to artistic research, they inspire an awareness of exposure and relationality. Ingold's version of exposure and vulnerability is based on intuition and awareness. It is the undergoing rather than doing that creates knowledge.[16]
The theoretical part of the course also explores film itself as a medium of artistic research, where the location becomes a protagonist. For example, German filmmaker Ulrike Ottinger’s *Under Snow* demonstrates how the materiality of snow shapes life, creating a symbiotic relationship between people and their surroundings. In this film, “the materiality of snow is the merciless, even tyrannical ruler that determines all areas of life”[17], which leads to unusual cooperation between the inhabitants.
By mixing these diverse perspectives - artistic, philosophical, anthropological, and cinematic-the course creates a complex, “impure” assemblage of knowledge. This vulnerable, entangled approach resists clarity, emphasizing instead the transformative potential of ambiguity and permeability.

Figure 15. “SHOULD I STAY OR SHOULD I GO”, Luisa Knödler, Victor Jansen, Gabriel Ziemer, Hannes Helms, 2023, Chair of Visual Arts (IfA) 6

OUTLOOK

For the group of four students in Brittany, the speed of the tide came as a surprise. They had traveled by train to a beach near a small port in Rothéneuf. The place is known for its 12 meter high tidal range. In a sort of artistic move, they entered the beach with shovels and began to build a round, dam-like structure of sand around a buoy they had found. There was neither a plan nor a script, just the shovels. They found a buoy as a starting point and decided to build a dam around it to protect it from the waves. An almost Dadaist approach.
The dam wasn't quite finished when the water was already a meter high. There was something humorous and parodic about the desperate attempts to shovel away the water and save the man-made

structure, especially in relation to the climate crisis and the desperate attempts to combat it by treating symptoms. In the end, the four human bodies float on the surface of the water near where the sand structure was just a few minutes ago. The buoy veers off course.

For the Department of Visual Arts, the projects surrounding the Stubborn places project showed how openness and vulnerability can take place within artistic research. The high degree of personal responsibility and free decision-making of the students, which was emphasized in the evaluations, helped to archive this. The project was successful for most students as they learned to really hear and understand the sites with their complex web of agencies and were sensitized to other ways of gaining knowledge. It is an aesthetic and ontological approach with the potential to foster a more just, because less anthropocentric understanding of ecology. Above all, it provides architecture students with a method of critical reflection and self-reflection, which, in turn, could serve as a transformative step towards a more sustainable and equitable urban future.

NOTES

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CULTURE-LED REGENERATION PRACTICES IN NON-URBAN TERRITORIES: AN ITALIAN CASE STUDY.

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INTRODUCTION

Today, under pressures that oscillate between global and local, the city experiences a process of ever-increasing 'implosion-explosion'.[1] In reflecting, therefore, on the urban future, it is necessary to broaden our gaze beyond the historically delimited and circumscribed idea of the city towards a territorial dimension.

Globalization has intensified exchanges and blurred the boundaries between rural and urban areas, leading to a hybridization of cultural identities and places. This fluidity has resulted in the intermingling and transformation of traditions, ideas, and ways of life. The concept of cultural identity has shifted, moving away from the idea of a pure, unchanging essence to a more dynamic, constantly evolving mix of influences.

For this reason, it is fundamental to see no longer at rural and urban areas as opposites but as interconnected and interdependent. The interaction between these spaces has dissolved traditional boundaries, with rural areas becoming more urbanized and cities adopting greener, more sustainable practices, creating new forms of rural and urban life.

In this context, rural areas are being reimagined and re-signified through urban lenses, although this carries the risk of losing their authentic cultural identities. Flowing between incising depopulation and slow but growing movement towards rural areas of people seek alternatives to urban living, especially in response to environmental and energy crises, new forms of rurality are emerging, challenging traditional notions of center and periphery and proposing different narration of the cultural dimension those areas.

Rural areas between urbanization and depopulation

Following the changes brought about by industrialisation and widespread urbanisation in the 20th century, Europe's rural areas are still experiencing a progressive process of depopulation and marginalisation, loss of resources and productive activities, as well as social capital and creative energies. The situation is particularly critical in the 'inner peripheries' - remote rural areas characterised by low economic activity, poor access to essential services and disconnection from political centres.[2] The risk is not only the loss of a physical heritage of traditional architecture and landscapes, but also of an intangible social capital consisting of traditions, local cultures and traditional agricultural practices that have contributed to maintaining bio-cultural diversity, preserving identity of local communities and the environment.

In the scientific debate of the last ten years, the issue of peripheral rural areas has gradually emerged and is the subject of growing attention throughout Europe, both because of their increasing weight in territorial cohesion policies and because of the renewed interest in them in the post-pandemic context, for the role they could play in preserving the environment. Indeed, redressing the imbalance between rural and urban areas has been considered a key element in the development of recent European policies for sustainable territorial development, in order to counteract the phenomena of urban congestion on the one hand and the demographic and social decline of non-urban areas on the other.

EU Responses to Territorial Imbalance

Since the 1990s, the European Union has sought to reduce urban-rural disparities through sustainable development policies. These policies aim to address both urban overpopulation and rural depopulation. The European Spatial Development Perspective[3] promoted a vision that integrated rural areas into broader territorial development, recognizing their essential role in ensuring a balanced and cohesive Europe. To further this goal, the EU's "Long-term Vision for the EU's rural areas"[4] focuses on enhancing services, promoting social innovation, diversifying rural economies, improving digital connectivity, and building resilience to social, environmental, and climate changes.

The two European projects ESPON GEOSPECS and PROFECY, in particular, identify "inner peripheries" as a distinctive type of rural area, "in the shadow" of metropolitan regions. The peripheral nature of these areas is primarily due to their difficult access to centres of economic activity, poor access to public services, absence of "relational proximity" and disconnection from the centres of political power.

This broader definition of "peripherality" extends beyond physical remoteness to include marginalization from economic and political perspective[5] but also from cultural and social networks. Urban citizen, but also who lives in those areas, often feel rural life feels as disconnected from the vitality of urban centers, where economic, social, politic e cultural activities are concentrated.[6]

CULTURAL DIMENSIONS OF RURAL PERIPHERALITY

In a dichotomic perspective, not only from a socio-economic but also from a cultural, between rural and urban area, rural areas are lag behind urban centers in terms of cultural opportunities[7] and infrastructure. In fact, although recently the importance of culture in rural development has gained more attention as a means to combat depopulation, cultural policies for these areas remain underdeveloped compared to their urban counterparts.[8] While the concentration of museums, cultural centres and universities in cities helps to shape a concept of cultural services capable of attracting a young and vibrant population, the cultural dimension of inland areas is often addressed through tourism promotion strategies. Cultural policies in rural areas are often narrow and conservative, understood as just another economic resource and focusing especially on built heritage, festivals, events and tourism. However, the close link between 'culture' and 'tourism' can also have negative effects, such as the museumization[9] of historic villages or the loss of local identity.[10] In practice, this urban-focused cultural model often fails to address the unique needs of rural communities and does not make full use of local cultural assets.[11]

Transforming the urban cultural model, therefore, requires a reinterpretation of the very concept of 'culture' in marginal areas: 'culture' which is the intangible value of a territory, shaped by its community, as recognized in Faro Convention.[12] In fact, it is crucial to prioritize projects and initiatives capable of involving local communities in the recognition and reinterpretation of legacies, practices and imaginaries, in order to co-produce a contemporary local cultural production based on memories, identities and traditions, allowing to complement socio-economic development strategies and offer alternatives to conventional urban growth models.

Following this perspective, we will analyze an example of a bottom-up "culture-led" regeneration practice in these territories, in order to understand how current culture-based regeneration practices contribute to the generation of new "cultural fields" for rural peripheries. Bottom-up cultural practices could indeed stimulate endogenous resources capable of promoting a contemporary cultural production based on local heritage, memories, traditions and identities, enhancing local cultural capital and offering alternatives to the dominant urban cultural model.

CREATIVE LANDS: CULTURE-BASED RURAL PRACTICES

Culture-Based Rural Practices in European and National Networks

Based on a review of various sources, similar to institutional documents[13] and institutional websites, practices from networks and research systems at European level that concentrate on urban and territorial regeneration with an artistic and/or community-led approach, in urban and non-urban areas, have been named.

Among the European and National/regional networks identified, several culture-led practices concentrated in rural areas with varying degrees of peripherality have been explored.

These practices are mainly promoted by cultural associations or associations working with artists, cultural institutions, environmental associations, local communities and activists. Overall, these associations promote enterprises that bring together art, nature and local communities to promote community development, environmental sustainability, education and the enhancement of cultural heritage. Most of them are self-organised practices linked to cultural and social activism organized in different legal forms, including artistic associations, social enterprises, foundations; only in some cases are the practices supported by public institutions, with different levels of participation and governance. Moreover, many of their activities involve the reuse or re-activation of disused built heritage, abandoned land and historical traces on the landscape (e.g. ancient path, archeological sites).

A focus on Italian case study

Although the selected culture-led regeneration practices are located in different European countries, several factors make Italy an interesting case study.

In Italy, the process of rural marginalisation has affected a large part of the territory, which is characterised by a stratified and culturally connoted landscape, a territorial system of small towns, villages and mountain settlements, and thus by a strong morphological specificity and territorial vulnerability, but also by a rich cultural and environmental heritage.

The "inner areas" comprise more than 4,000 municipalities (48.5% of the total) and will be home to around 13.3 million inhabitants on 1 January 2024. These regions often lack basic services such as hospitals, secondary schools and public transport, and are generally located in mountainous or hilly areas, mainly in the south and the Apennines.

The situation is particularly critical in the south. The Southern Italy is facing severe demographic decline, with a loss of 6.3% of its population between 2014 and 2024. This decline is exacerbated by high emigration rates and an ageing population.

The National Strategy for Inner Areas (NSIA),[14] launched in 2014, specifically addresses the needs of remote and rural communities. The NSIA categorizes Italian municipalities according to their distance from essential services, identifying 'inner areas' as those that are at least 20 minutes away from basic services such as education and healthcare. These areas are often rural, with declining populations and diminishing economic opportunities. The main aim of the strategy is to improve access to services while promoting economic and social development through localized, stakeholder-driven approaches.

In fact, in the internal areas interested in the first SNAI programming cycle 2014-2020, about 16% of the resources have been allocated to the theme of "culture and tourism" (219 projects), and more than

half of these are explicitly aimed at the promotion of tourism or at physical interventions on monumental assets. In the remaining projects, the main objectives are the sustainable use of highly valuable natural areas or the creation of parks, the creation of festivals focusing on rural traditions, the creation of inter-municipal cycle paths and footpaths.
According to the NSIA's classification, by 2020 almost half of Italy's municipalities will be considered as inner areas, covering 60% of the country's territory but housing only 23% of the population. The NSIA's efforts focus on tackling physical and social isolation by improving accessibility and promoting local economic and social cohesion.
Despite the implementation of a NSIA in 2013, progress has been limited. At the time of the last report,[15] only 4% of projects from the 2014-2020 funding cycle had been completed and 23% had not even started. The 2021-2027 cycle, which covers 56 additional areas, has barely begun.
The Basilicata region is also struggling with these problems. In 2023, Basilicata, together with Campania, will have the lowest negative migration balance of all the Italian regions. The population trend in Basilicata shifts from -0.11% in 2002 to -0.66% in 2023. In this region are located 4 of the 72 pilot areas of the NSIA strategy 2014-2020.
Of the 83 million euros in funding, only 9% is allocated to the theme of culture and tourism. The types of action proposed concern the adaptation and enhancement of the cultural and environmental heritage, in particular footpaths (paths, cycle paths, itineraries) and built heritage, the renovation and refunctioning and management of villages and the organization of events. In this context, bottom-up practices are a fundamental tool to overcome the limitations of institutional policies in involving the local community and creating different models of development.
The selected case study started a process aimed at generating a "new cultural model", where culture is directly shaped by local communities, based on the recognition of local material and immaterial heritage.

WonderGrottole, a rural culture-led regeneration practice

WonderGrottole is bottom-up initiative aimed at revitalizing the historic center of Grottole, a small village in Basilicata, southern Italy, with a population of 2,100. Over the years, Grottole has suffered from significant depopulation, particularly in its historic center, where many buildings now stand abandoned. Today, the historical center hosts between 200 and 300 inhabitants, more than 70% of whom are over 70 years old. This project seeks to reverse this trend by restoring these abandoned structures and attracting new residents, both temporary and permanent, to foster interaction and relationships with the local population. The project began in 2013 with an event called "Netural Walk," organized by Casa Netural, a coworking space in nearby Matera. This event sparked the first ideas for what would become WonderGrottole, facilitated by exchanges between Casa Netural and Grottole residents, particularly Silvio, the local Municipal Culture Councilor. The initiative gained momentum over the years, involving the community in mapping the village’s resources and abandoned buildings. A key tool in this process was a game developed as an app, which allowed locals to identify and document 629 abandoned buildings in the historic center. The project “WonderGrottole” focuses on promoting sustainable slow tourism and temporary residency as catalysts for regenerating the village’s historic center. The project's approach is rooted in social innovation, encouraging exchanges between the local community and temporary residents, such as tourists, researchers, artisans, and artists, attracting energies and skills from all over the world to be shared with the inhabitants of the small town. These exchanges are designed to highlight and leverage local resources, fostering a renewed sense of community and belonging. A significant milestone for WonderGrottole came in 2019 when it partnered with Airbnb to launch the Italian Sabbatical Programme. This initiative issued an international call for volunteers to live in Grottole as "temporary

residents" for three months, contributing their skills to the village's revitalization. The program was highly successful, attracting over 280,000 applications within a month and garnering extensive media coverage. Since its creation, WonderGrottole has involved more than 200 people from the local community. In 2018 and 2019, Grottole families opened their homes to students from all over Italy for the residential workshops of the Master in Relational Design. In addition to these initiatives, WonderGrottole has purchased and renovated three abandoned buildings to serve as key project hubs. WonderCasa, the association's headquarters, and WonderStudio, a workshop space for artistic creation, now provide accommodation and coworking spaces for both local and temporary communities. The project also collaborates with local producers to offer tourists experiences related to local wine, honey, and ceramics. Furthermore, WonderGrottole has organized cultural events, such as international architectural competitions, project exhibitions, and festivals, contributing to the village's cultural vibrancy. All the projects promoted by WonderGrottole have common elements: they connect landscape and local resources to renew the sense of belonging of "old and new inhabitants" to their territory. Through collaborative projects with local institutions, associations and businesses, the project has promoted the creation of networks of cooperation and knowledge exchange, as well as the involvement and empowerment of the local community in terms of institutions, associations, businesses and individual residents of all ages.

The project's impact is evident in the increased engagement of the local community, which is now more involved in the village's social, political, and economic life. Since its inception, WonderGrottole has involved over 200 local residents in various initiatives.

In 2022, WonderGrottole attracted around 2,000 tourists to the village, and its facilities hosted 27 temporary residents from around the world. The project has not only contributed to the physical regeneration of Grottole's historic center but has also fostered cultural exchange and community empowerment, making Grottole a model for sustainable rural revitalization.

CONCLUSION

This contribution examines how institutional policies in inner peripheries often focus on territorial marketing for urban tourism, potentially trivializing and flattening local cultures and identities. These policies typically adhere to urban-centered cultural models, emphasizing access to cultural services and infrastructures like museums, archaeological sites, and cultural hubs. However, promoting contemporary cultural production rooted in local heritage, memories, traditions, and identities could enhance ongoing socio-economic development strategies and provide alternatives to dominant urban cultural models.[16]

The analysis highlights a best practice in culture-led regeneration in southern Italy, selected from European networks and projects focused on both urban and non-urban areas. This practice, developed through partnerships among public, private, and third-sector actors, deeply involves the local community while extending its network beyond local boundaries. It successfully integrates natural and cultural heritage, various artistic expressions, new technologies, local traditions, innovative agricultural practices, and sustainable tourism.

The WonderGrottole project is a key example: the attraction of temporary residents fosters knowledge exchange and skill-sharing, creating mutually beneficial relationships with permanent residents. This interaction, through storytelling, visual arts, and physical engagement with the local environment, is based on new forms of narration that propose a close relationship between memory and contemporaneity, a new collaboration between institutions and inhabitants, with effective collaborative governance[17] and community engagement and new synergies between external resources and local communities.[18] It has helped to activate dynamic development processes and opening up new spaces of participation, resource valorisation and hybridization.

NOTES

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EVALUATING FACTORS THAT IMPACT THE ROBUSTNESS OF HISTORIC URBAN PUBLIC SPACES – CASE OF BHOPAL, INDIA

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INTRODUCTION

Urban public spaces in a historic city embody the values, character, and purpose of the context and have always been special and timeless.[1] From prehistoric times through the Middle Ages and into the modern age, historic urban public spaces (HUPS) have always been an integral part of the layout of cities and towns as well as the daily activities of urban communities.[2] HUPS are characterized by their unique urban layout, architectural design, and the embodiment of the social and cultural system set within a historic context.[3] However, the successful engagement of an individual within HUPS is intricately shaped by its design qualities such as its robustness that determines the capacity to accommodate change without substantial modifications in the physical infrastructure.[4] Robustness is thus an essential quality that affects the degree to which people can use a given place for different purposes that further elicits that the more robust a place, the more choices it can offer its users to be used for many different purposes making it more meaningful.[5]

Existing studies have researched resilience as a quality of HUPS, while the concept of robustness of a HUPS lacks sufficient research and inquiry. The dichotomy in the functionality and preservation of HUPS underscores the need for a nuanced examination of the factors influencing their robustness and sustained relevance in the context of dynamic urban environments.[6] Evaluating the robustness of a historic public space becomes crucial as it directly impacts its longevity, adaptability, and continued relevance within the urban fabric.[7] This study, thus delves into the evaluation of the robustness of HUPS in the context of the historic city of Bhopal in India. The main aim of the study is to identify the factors through extensive literature and uncover additional considerations through empirical studies. The HUPS selected for the study are Gauhar Mahal and Iqbal Maidaan in Bhopal, India due to their distinctive historical and cultural value (Figure 1). Both have two centuries-old legacies and continue to be used for different activities in the contemporary age, thus serving as relevant sites for exploring their robustness.

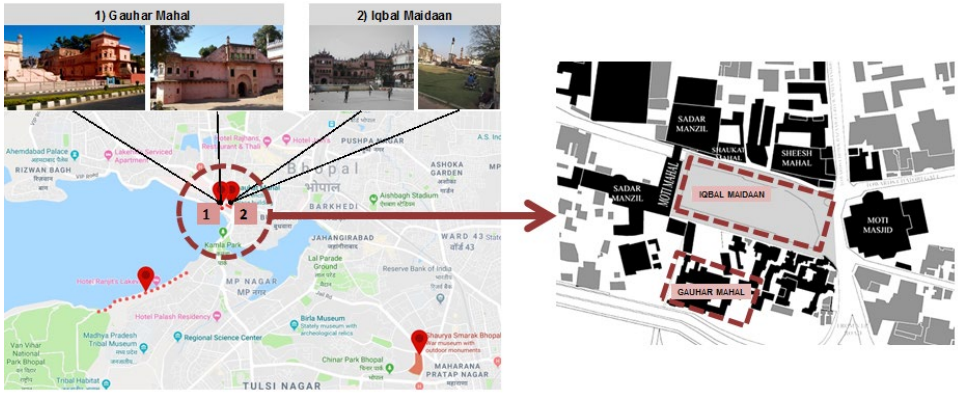

Figure 1. The context of study – The Gauhar Mahal and the Iqbal Maidaan, Bhopal, India

LITERATURE REVIEW

The concept of robustness has been defined by several authors in their seminal texts. Previous studies describe robustness as a characteristic of locations that can serve multiple purposes, providing users with greater flexibility compared to places with designs that restrict them to a single, unchanging use.[8] Robustness has also been described as the quality of being able to adapt to changes without undergoing significant modifications in its physical form, thereby effectively resisting functional obsolescence.[9] Studies also state that the relationship between a space's form and the uses it can support determines how robust it is.[10] However, the study additionally underscores that beyond the connection between a form and its function, robustness is also influenced by added significance originating from the values, meanings, and symbols attached to and embodied by that form.[11] Further three distinct forms of relationships between form and function have been delineated such as indifference, which characterizes a scenario in which 'space' and 'event' exhibit functional independence from each other; reciprocity which involves spaces and events that are entirely autonomous and mutually shape each other's existence; and conflict that arises when a space intentionally designed for a specific function unexpectedly accommodates an entirely different function.[12] Moreover, previous studies indicate three prominent factors that impact the robustness of a space – cross-sectional depth, access, and shape.[13]

Additionally, the factors that can increase the robustness of a place are active areas and the edge of the space.[14] Active areas refer to indoor spaces extending activities into adjacent outdoor areas, enhancing the robustness of the outdoor space.[15] The edge of the space designates the boundary between buildings and public spaces, facilitating the coexistence of indoor private activities with various outdoor public activities, thereby increasing the robustness of adjacent places.[16] Previous studies further address challenges related to robustness, highlighting two key issues. Firstly, the problem of patronage arises, where design decisions are dictated by those funding the project, resulting in a rigid design that caters to specific aspects of a user's life, potentially limiting adaptability. Secondly, the issue of specialization indicates that designers often create specialized spaces for various activities due to patron influence.[17] This segmentation of public space into distinct compartments for separate activities diminishes the overall robustness of the place. These factors identified by previously done research suggest a high level of relevance as they talk about association and effects of a function on their respective place of occurrence.[18]

Further, the existing study provides a list of essential characteristics for a robust urban space. Firstly, it should be open, avoiding clutter related to specific activities. Secondly, it needs to be flexible, allowing for sub-division while accommodating diverse uses and events. Thirdly, an ideal urban space

should be varied, avoiding dominance by a single mode of travel, infrastructure, or use. Additionally, it should be comfortable, and capable of adapting to various micro-climatic and weather needs. Lastly, the space should be sociable, supporting diverse types and patterns of social activity. The proposed research framework based on the intensive literature review presented above is illustrated in Figure 2.

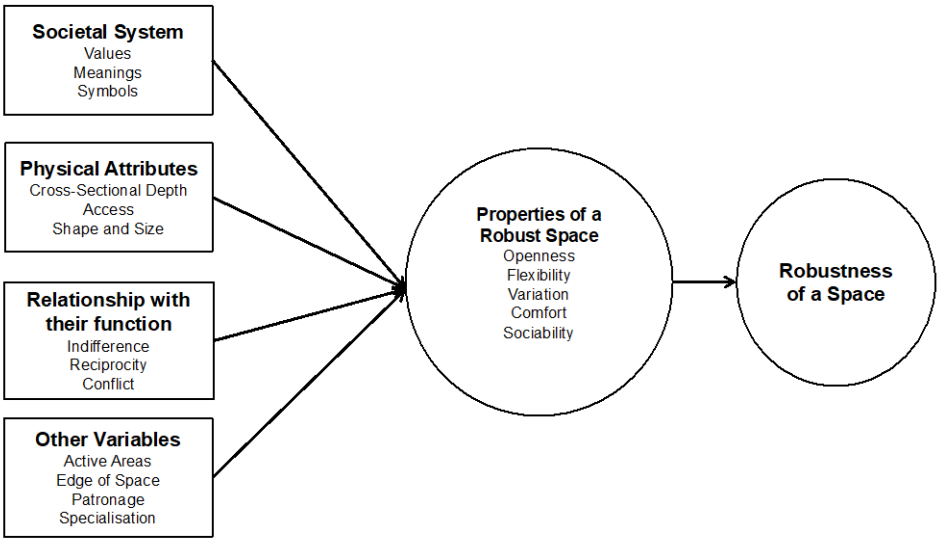

Figure 2. Proposed research framework of study based on literature review

METHODOLOGY

The present research adopts a qualitative method approach wherein the factors that impact the robustness were derived from an extant literature review. The literature review reveals the following four factors - societal system, physical attributes, the relationship between form and function, and other variables. These factors further included certain indicators which affect the robustness of a place. From the literature review, the properties of a robust place were also deduced, namely - openness, flexibility, variation, comfort, and sociability. Based on these identified parameters, a framework was formulated which was used to test the robustness of selected sites of study.

Data Collection

To comprehensively evaluate the robustness of HUPS in Bhopal, this research employed a multi-method qualitative data collection strategy, incorporating semi-structured interviews, on-site observations, and photographic documentation.

Semi- Structured Interviews

A series of semi-structured interviews were conducted with a diverse group of stakeholders including residents, historians, urban planners, and regular site users, to explore perceptions of Iqbal Maidaan and Gauhar Mahal's robustness. Through random sampling, the interview was conducted with as many as 50 respondents. The flexible yet consistent format allowed participants to express unique insights. The transcribed interviews were thematically analyzed, revealing recurring patterns and key perspectives on the lived experiences and socio-cultural significance of the sites.

On-Site Observations

Systematic on-site observations were conducted at various times of the day and week to capture the dynamic use of space and user interactions. Observational protocols documented the physical attributes, activities, and social interactions within the selected HUPS, providing real-time data on space utilization. Detailed field notes were recorded, focusing on spatial configuration user behavior, and surrounding conditions, which were analyzed to understand the relationship between form and function in these historic spaces.

Photographic Documentation

Photographic observations documented the physical state, usage patterns, and aesthetics of the selected HUPS. Photos were taken at various times and supplemented with secondary images to capture year-round activities. This visual data enhanced the observational and interview findings, offering tangible evidence of robustness indicators, which were systematically analyzed alongside field notes to reinforce conclusions.

Data Analysis

The triangulation of data from semi-structured interviews, on-site observations, and photographic documentation allowed for a nuanced analysis. Based on all the data gathered mind maps were created to understand the relationships between all the factors and properties of robustness identified from the existing literature and empirical evidences. These mind maps visually depicted the complex interactions, with green arrows indicating positive impacts and red arrows indicating negative impacts that were instrumental in deriving the results and findings of the research conducted.

CONTEXT OF STUDY

Case Study 1 - Gauhar Mahal

Gauhar Mahal, built in 1820 by Qudsiya Begum, the first female ruler of Bhopal and an early advocate for women's liberation, is renowned for its blend of Hindu and Mughal architecture.[19] Known as Bhopal's first palace, it is situated in the Peer Gate area near VIP Road and overlooks the 1000-year-old Upper Lake, a vital water source for the city. This prime location enhances its accessibility to the public (Figure 3 & 4).[20]

Originally designed for residential and administrative purposes the historical building now serves as a venue for exhibitions, potters' markets, movie shoots, and heritage tourism.[21] Owned by the Bhopal Development Authority, its maintenance is overseen by the Madhya Pradesh Tourism Board and MP State Handloom Society. In 2015, the Ministry of Textiles, Madhya Pradesh Handloom and Handicrafts Vikas Nigam, and INTACH restored the palace, transforming it into an urban haat while preserving its original essence.

These organizations control the activities held here, currently limited to a few, with supervised access between 10:00 am and 8:00 pm. The adjacent outdoor plaza is used during exhibitions for product displays, food stalls, and children's swings.

Heritage expert Savita Raje highlights its uniqueness, as it lacks separate areas for men and women, reflecting the fact that the ruler was a woman. The Mahal's regal atmosphere continues to attract visitors, continuing the country's cultural heritage through displays of textiles, handicrafts, and local art.

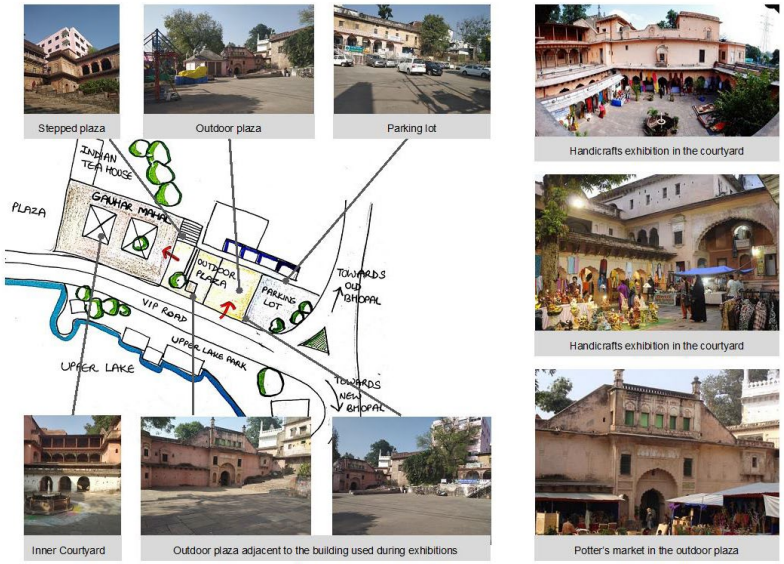

Figure 3. Gauhar Mahal: Contextual plan and corresponding areas

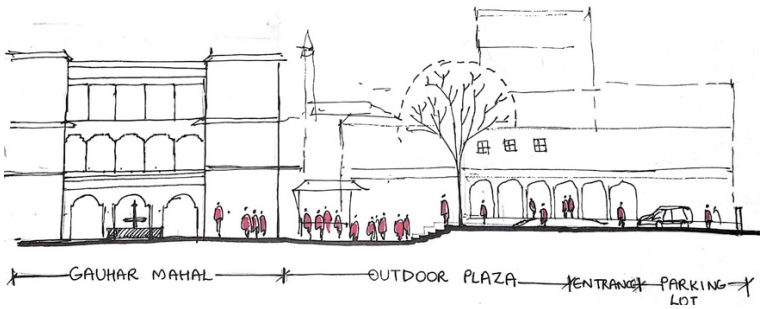

Figure 4. Section through Gauhar Mahal and its surroundings

Case Study 2 - Iqbal Maidaan

Iqbal Maidaan is an open complex named after Mohammed Iqbal, a revered Urdu poet and philosopher.[22] He is best known for writing 'Sare Jahan Se Achha Hindustan Humara' and many other beautiful 'nazms' during his stay in Bhopal.[23] Originally, the place was known as Khirniwala Maidaan, established as an orchard during the Begum era with "Khirni trees", and as a meeting point for royalty and commoners.[24] One of these trees survives today and is revered as a heritage tree, also known as the "Tree of Life".[25] The renaming from Khirniwala Maidaan to Iqbal Maidaan was done by the Government of Madhya Pradesh.[26] Iqbal Maidan is centrally located in old Bhopal and serves as a key landmark, connecting important areas like Chowk Bazaar, Chatori Gali, and the Hamidia Hospital area, and is surrounded by several historically significant buildings like Gauhar Mahal, Moti Mahal, Sadar Manzil, Sheesh Mahal (Figure 5 & 6).

In the present day, Iqbal Maidaan serves as a vibrant public space, frequented for recreational activities like football, gully cricket, and chess, with elders utilizing seating areas for rest and social interaction. With no restrictions to access or in timings, it remains active round the clock.[27] Owned and maintained by Bhopal Municipal Corporation, the space is designated for public use and also hosts political and spiritual events, under careful supervision to ensure activities remain harmonious and non-disruptive.

Iqbal Maidaan also houses the Iqbal Library, established by local youths, featuring a collection of Iqbal literature, as well as magazines, books, and journals. The library hosts the annual "Yome Iqbal"

festival on April 21st. Situated at a sunken level from the ground, its roof doubles as a stage for occasional socio-cultural and political events.
Iqbal Maidaan has undergone renovation many times, with the implementation of design elements like strong paving material, lights, and vegetation that help in supporting the various activities occurring over here, boosting its multi-functionality, and thus increasing the robustness of this place.

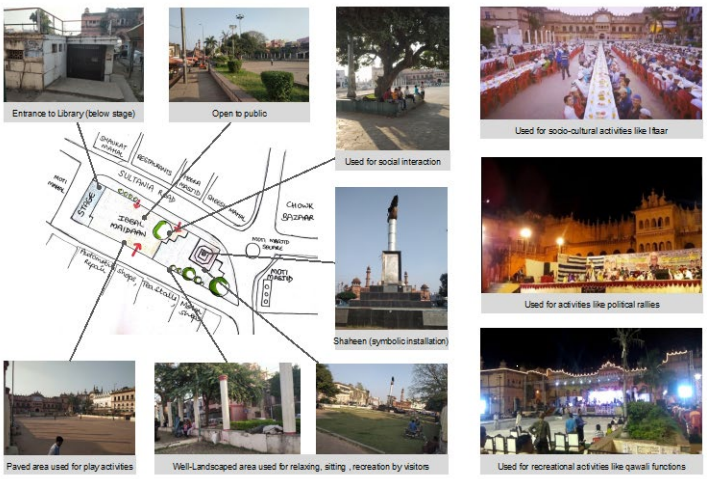

Figure 5. Iqbal Maidaan: Contextual plan and corresponding areas

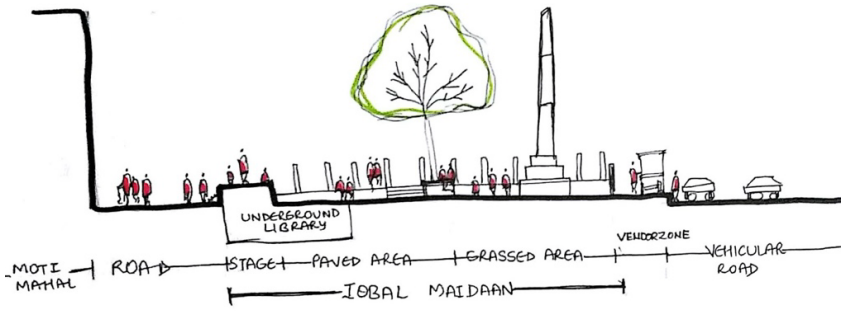

Figure 6. Section through Iqbal Maidaan and its surroundings

RESULTS AND DISCUSSION

The collected data was analyzed into mind maps for each selected HUPS (Figure 7 and Figure 8), based on which the following results were deduced.

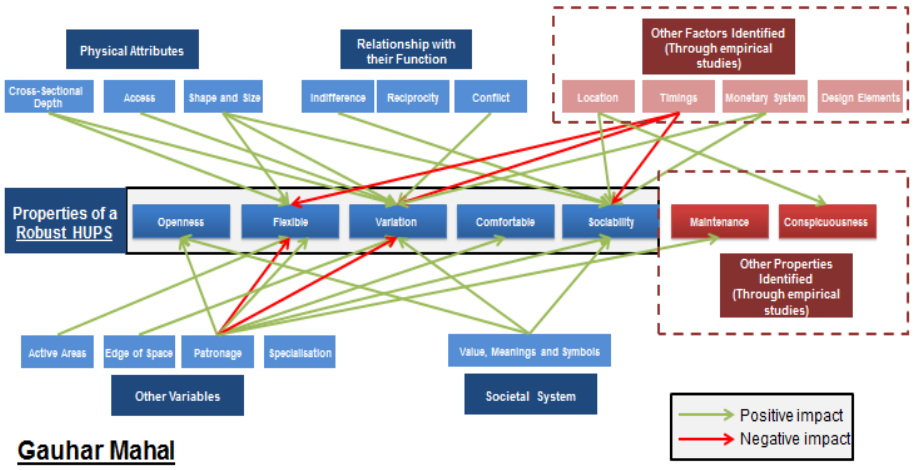

Figure 7. Mind map showing the relationship between the factors and the properties of Gauhar Mahal in context to Robustness

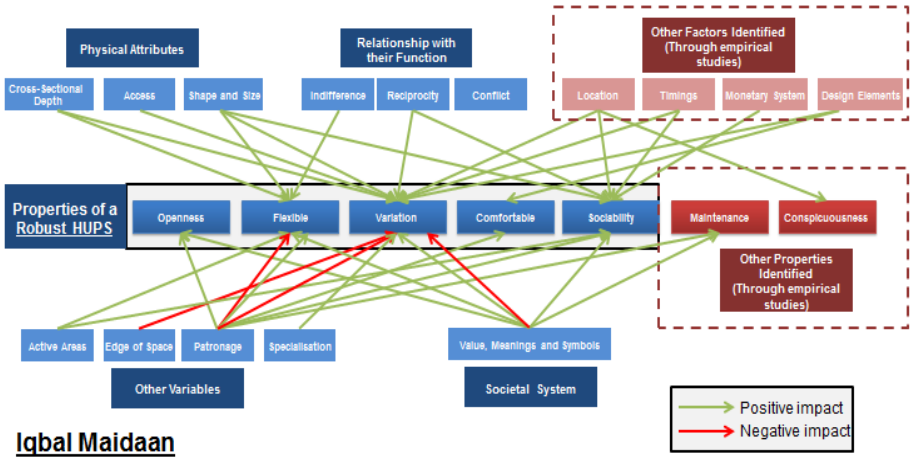

Figure 8. Mind map showing the relationship between the factors and the properties of Iqbal Maidaan in context to Robustness

Evaluating Factors Impacting Robustness in HUPS

Empirical studies suggest that Physical Attributes, including cross-sectional depth, access, and shape and size of the place, strongly influence a HUPS's robustness by contributing to its spatial configuration.[28] This determines the variation and flexibility which facilitates their adaptation to diverse activities. Further, the Relationship between form and function—characterized by indifference, reciprocity, and conflict - has been identified as a key factor affecting properties like flexibility and sociability, both of which are integral to a HUPS's robustness.[29] In both sites of exploration, it was observed that the coexistence of multiple functional relationships further boosts the overall utilization of these spaces.[30] The study also found that the societal system—encompassing the associated set of meanings, values, and norms, directly influences a HUPS's openness, variation, sociability, and flexibility. For instance, Gauhar Mahal's historical significance has led to its preservation and maintenance by the government, which ensures its sustained use for activities that

require an imperial ambiance, such as exhibitions and film shoots. Conversely, Iqbal Maidaan, once used for flea markets, has seen a reduction in flexibility and sociability due to the restriction of commercial activities. However, the inherent public value of the space still allows for continuous, unrestricted use, thereby maintaining a certain degree of robustness.

Regarding other variables, it was recorded that active areas positively impact a place's robustness by facilitating the extension of activities from indoor to outdoor and vice versa - in Gauhar Mahal, exhibitions often extend from the outdoor plaza into the building's interior. Similarly, visitors to Iqbal Maidaan frequently utilize its underground library, demonstrating the positive effect of active areas on spatial usage. The Edge of Space has been found to influence the variation of activities within a place, thereby affecting its robustness. For instance, the outdoor plaza at Gauhar Mahal enhances its robustness by supporting exhibitions and recreational use. In contrast, the vehicular road separating Iqbal Maidaan from surrounding heritage structures creates a perceptual and physical disconnect, impacting the place's overall utilization.

Regarding patronage, while existing studies indicate that it can reduce a place's robustness by limiting activity types, site observations reveal a dual impact. Patronage not only restricts activities but also ensures their efficient and supervised execution, preventing obsolescence and supporting continued use.[31] This balanced control contributes positively to the place's enduring functionality. Similarly, specialization is often viewed as diminishing robustness by segregating spaces for specific activities, which was noted to enhance pluralism. By accommodating diverse activities in specialized fragments in both sites of exploration, specialization attracted varied users and expanded the degree of utilization, demonstrating its potential benefits on HUPS's robustness.

Additional Factors Identified from Empirical Studies

Empirical site studies have revealed several additional factors influencing the robustness of a place, beyond those identified through literature review. Location plays a crucial role, as the characteristics of a place's surroundings directly affect its utilization and accessibility. Gauhar Mahal's visibility and accessibility are boosted by its location near VIP Road, while Iqbal Maidaan's proximity to the densely populated Chowk Bazaar enhances its sociability by attracting a diverse user base. Timings also significantly impact a HUPS's robustness by affecting its utilization. Gauhar Mahal's restricted hours (10 am-8 pm) lead to periods of underutilization, while Iqbal Maidaan's unrestricted access supports continuous use until late hours, thus maintaining a high degree of utilization. The monetary system, or the presence of a ticketing system, affects a HUPS's robustness by influencing the volume and variety of users. Both Gauhar Mahal and Iqbal Maidaan benefit from free access, which helps attract a broad spectrum of visitors and facilitates a higher level of activity within these spaces. It was documented that design elements also shape user experience and utilization. In Iqbal Maidaan, the integration of seating, lighting, materials, vegetation, and symbolic installations enhances the user experience and boosts the space's utilization and hence robustness, whereas the absence of such efforts in Gauhar Mahal limits its potential for diverse activities and thus reduces its robustness.

Additional Properties Identified from Empirical Studies

Empirical studies have highlighted some additional properties that should be considered for assessing the robustness of a HUPS, beyond those identified through existing literature studies. Maintenance emerged as a critical property, as it significantly influences the degree of utilization by affecting the physical condition and environmental quality of the space. This, in turn, impacts user experience and overall robustness. As a property, maintenance is impacted by factors like Patronage and Societal System. Observations revealed that maintenance levels are closely linked to factors such as Patronage and the associated Societal System. Conspicuousness, or the visibility of a place, also plays a key role

in determining its utilization and robustness. A place's conspicuousness, impacted by its location, affects user awareness and engagement, which directly impacts its utilization levels.
Based on the above findings, the proposed research model is illustrated in Figure 9, indicating the relationship between the factors and properties of a robust HUPS.

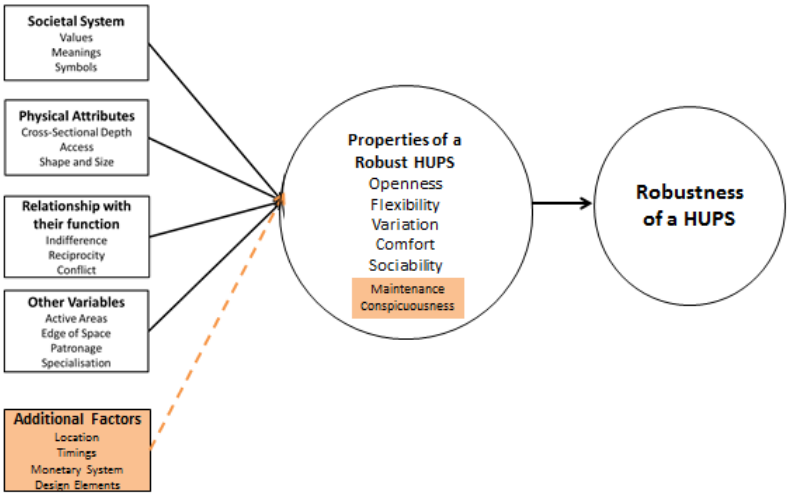

Figure 9. Proposed Model based on the findings of the empirical studies

CONCLUSION

The study concludes that a robust public space can withstand the test of time, accommodating changing societal needs, technological advancements, and evolving design trends without compromising its fundamental character.
Research results show that factors like physical attributes of a form *(Cross-sectional depth, Access, Shape and size)*, the relationship between form and its function *(Indifference, Reciprocity, Conflict)*, the societal system associated with the place and other variables like *Active Areas, Edge of the Space, Patronage and Specialisation* impact the properties of a robust HUPS *(Openness, Variation, Flexibility, Comfort, Sociability)* thus affecting its overall degree of utilization and hence robustness. However, it is worth noting that while literature studies suggest that patronage and specialization disrupt the robustness of a place, the research indicates that these factors can also have a positive effect. In addition to the factors identified in previous research, the novelty of this study is that it also highlights the importance of location, timings, monetary system, and design elements in determining the robustness of a place. Moreover, other than the properties identified from the literature review, the maintenance and conspicuousness of the place should also be considered important properties of a robust place as they highly influence the degree of utilization of the place, thus impacting its robustness.
Understanding the robustness of a HUPS allows for informed conservation and adaptive reuse strategies, ensuring that these spaces remain vibrant, accessible, and meaningful to the community. Preservation efforts guided by a comprehensive evaluation of robustness contribute not only to the retention of historical and cultural heritage but also to the sustainable development of urban landscapes.
The study is limited to the context of a developing country such as India with specific examples from Bhopal. The study can be well extended to other HUPS in India and to other developing countries to account for its generalizability and the validation of the results.

NOTES

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MISTAKES, NOT RULES! ON ROME, POLITICS AND HERITAGE

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CULTURAL PAST / URBAN CONTEXT

"Urban futures, cultural past". This title contains an almost infinite variety of meanings, but it is possible to narrow the investigation focusing on the word "urban" as related to the ability of humankind to live together with rules, rites, rituals organizing our communal living and defining a piece of our cultural past, our intangible heritage. This attitude of living in communities is nowadays mainly expressed in the form of the city. In Italy, 83% of the population -- 51million people -- are residing in cities, Rome the biggest with a metropolitan area of approximately 4.2million inhabitants. [1] Those numbers exist in a territory in which the weight of the cultural heritage is enormous and ever-present, both in the image of the city and in daily life. A cultural richness, physical and symbolic, that makes it necessary to find a lens through which to analyze and restrict the field of observation.

Connotation of heritage

One of the main instruments of interpretation of Rome has been, since 1748, the Nolli map. The map depicts the "ground floor" of Rome as a continuous net made of spaces accessible and shared by the public. White voids that Hannah Arendt would call 'spaces of appearance', where the interpretation of public is related to two observations: "first, that our feeling for, and understanding of reality depends on appearances and thus on the existence of a public worldly realm into which we and our 'objects' can appear; and second, that the term 'public' signifies 'the common world' as a human artifact fabricated by human hands and through human affairs". [2] Arendt's reflection involves moreover the time factor, stating that "If the world is to contain a public space, it cannot be erected for one generation and planned for the living only; it must transcend the life-span of mortal men. Without this transcendence into a potential earthly immortality, no politics, strictly speaking, no common world and no public realm, is possible.".[3] In Rome this transcendence is morphologically and physically represented by the accumulation of layers of the city, so that the spaces of appearance are multiplied and transmitted along the generations as the most relevant intangible heritage of the city: the Nolli white voids, the public social spaces. Their meaning and their symbolic value is not related to their morphology, nor to their functional use, but rather to the role they play in the collective memory, a reminder that a city is firstly and mainly a place of relations, a public dimension. This dissertation will thus approach the urban complexity having in mind the role of the intangible, social heritage in the construction of a collective urban future.

FUNCTIONAL ROLE/SOCIAL ROLE

In the midst of Rome's transcendence, the example of the Roman complex of "Portico D'Ottavia" helps us understand Rome 'spaces of appearance' and their ontological core.

The Portico d'Ottavia is a monumental complex, built originally in 146 B.C. as a "quadriporticus", at the southern edge of Campo Marzio, next to the Tiberina Island, strategic crossing point on the river. It was rebuilt several times during the Roman empire and monumentalized by August in connection with the construction of the Theater of Marcello.[4] The building consisted of a rectangular temenos surrounding 2 temples, characterized on the central axis by a protruding propylaeum,[5] functionally a mixed used public space, far from the imperial rituals of the For a, dedicated to the daily rites of the Campo Marzio working clas. The front of the portico faced the via Tecta, one of the most important paths of imperial Rome, that survived through centuries, becoming a pilgrimage route called "Via Peregrinorum".[6] Because of this proximity beginning in the VIII century AD, historic sources documented the presence of a church dedicated to S. Angelo,[7] inserted in the protruding propylaeum. The area became a crucial node of the city daily life, and the remains of the portico turned into the Rome's fish market. The new function created a continuity of use, reflected in the architectural continuity of street-portico-piazza, that lasted up until 1885, and became so prominent and important that the church was named after it: Sant'Angelo in Pescaria. The management of the "Pescaria" was a shared duty of aristocracy and common people, and the jurisdiction over the area was run by the "Magister Viarum" since the public ground, not the building, played the main role.[8] It was the people, its "heterogeneous and laic component" [9] that, beyond the monumental attempt of the August renovation, recalled the libertarian origins of Campo Marzio, re-signifying the area by using a mistaken function. The leading role in the transformation was attributed to the ontological core of the complex, its intangible heritage: the portico was and continued to be a social aggregation hub, manifesting the transformative use of the object of architecture "as a three-dimensional, complex reflection of meanings and symbolic investment of the community who uses it." [10]

MISTAKES | CONSERVATION | RULES

Mistakes

Far from any ideological re-signification or from a gestaltic approach, the mistaken function of the fish market allowed the conservation of the area, revealing "the evolutions of the 'chaotic system' that constitutes the body of the city with both its physical and semantic structure" [11]. Mistakes underline the limits of the archeological-antiquary approach: the degradation of the Portico D'Ottavia began with the decision to isolate the Roman complex through centuries of excavation campaigns. Today the portico, abides to the rules of archeological preservation; the mistake of the market has been erased, and the only possibility left it is the aesthetic contemplation of an isolated monumental object.

As for the Portico D'Ottavia, mistakes must be interpreted as possibilities, spaces of appearance where humankind can establish new relations with the objects of architecture. Recalling the Heidegger reflection on how we live, on how "bauen", to dwell, is to leave traces, by means of construction, mistakes allow us to operate a change on a place and thus make that place appear through a different lens. Mistakes are a possibility to make places appear for what they are not, yet. And what it is to inhabit the city, to dwell it in its transcendence, to imagine the possible futures of an urban context, if not making space for its transformations, allowing new imaginable uses? "Mistakes somehow point toward some forgotten potential. Mistakes are progressive (...) Mistakes are episodes in which the rule manifests itself in all its weakness and clumsiness." [12]

Rules

The Rome Municipality released on June 6th 2019 the new guidelines of Urban Police regulating the common social and civic living, the security and quality of the urban environment, the preservation of public and private patrimony and the uses of public ground and public spaces. It starts with a list of behaviors prohibited on public ground: "on public grounds, including parks, public gardens, green areas; to safeguard security, livability and decorum of the city it is forbidden be stationed in a public place with a conduct contrary to accepted standards of behavior and/or to decorum, and moreover to be seated, or to eat and drink, on historical, artistic, archeological and monumental heritage, as well as on public or private ground…".[13] The chapter "protection of the public and private heritage", reports that in addition it is also forbidden to: "benefit of the monuments, fountains, archeological remains and all the heritage protected by the law, in opposition to bans and prescriptions contained in these guidelines and to benefit of them in any way contrary to their historical and/or artistic prerogative".[14] An imposition whose conceptual basis are clarified at the very beginning of the chapter: "Areas of particular historic, artistic and cultural value (…) and those declared UNESCO World Heritage Site, are mainly destined to the aesthetic fruition of the existent monumental and artistic perspectives.".[15] It is difficult to associate such guidelines that nonetheless refer to UNESCO with the evolution of the concepts of culture and heritage promoted by the same organization.

Conservation

It becomes important to recall that in the last decades there has been a paradigm shift in heritage thought. Urban heritage is now considered as a whole, including all the city's dynamics including tangible and intangible heritage, as stated in the 2011 UNESCO Recommendation on the Historic Urban Landscape (HUL),[16] going beyond the early XXth century idea of conservation of monuments for their mere cultural historicity and aesthetic value. Nowadays "conservation acknowledges that change is constant", more so in public space subject to perpetual and diverse interactions. A crucial role is played by culture as "a key tool for promoting sustainable urban development through the safeguarding of cultural heritage and the promotion of the diversity of cultural expressions".[17] In an historic moment in which the gap between wealthy and poor is broadening, in architecture the sensibility is growing towards a vision of public space as a prerequisite for democratic societies.

Figure 1. Giuseppe Vasi, "Piazza di Pescaria", 1752

THE NEGLECTED PUBLIC

The merely aesthetic attitude has already had several huge consequences on Rome's approach to its public heritage across period, style or functional differences, and it's been justified by arguments regarding security, decorum or property.

Security

March 10th, 2008 the Roman Forum closed its gates and ceased to be a freely accessible area. The choice was made to protect the area from the massive pressure that thousands of tourists were imposing daily on the archeological complex. But daily visitors increased from 13,000 in 2008 to around 25,000 in 2023. Moreover, turning the Forum into a gated, restricted site, raises various issues related to the nature of such a site, to its ontological core. The Forum was born as a place of confluences, as the crossing path of commercial routes, close to the River and at the foot of the Capitoline Hill. These two landmarks are now detached from the Forum since the paths connecting them are closed. Beyond ideological speculations (i.e. the issue of via dei Fori Imperiali), and obvious concerns of preservation, it is undeniable that the Forum is currently used as a mere aesthetic scenography and interpreted only in its monumental aspect, while the area's first and foremost role was to be a social space. This role that doesn't pertain only to the past; as recalled by the former Rome Superintendent Adriano La Regina: "theoretically there is no difference in between Piazza Navona and the Roman Forum" [18]. They are both public spaces, born for sociability, to allow the expression and fruition of a community. "There are obviously controls and attentions that have to take place, but we cannot take for granted that our society is uncivilized and unworthy of experiencing a monument as a part of the daily urban environment. If we were to think this way, then we should renounce pursuing the cultural growth of our community." [19] La Regina was in the 80's one of the main architects of the "Progetto Fori" that aimed to create a big, open, accessible park connecting the Roman Forum with the Appia valley, activating the city's periphery thanks to a free, green, public connection with the historic center. The idea, abandoned after heavy ideological and political debates, intended to mark the public, social character that the cultural heritage of Rome represented in first place, turning the Forum again into a place of confluences, not only for tourists but firstly for citizens. This concept is resurfacing in the recent competition for the new archeological promenade on via dei Fori Imperiali, that invites to look at the archeological area as a urban hub for citizens public life. But the tools supporting this goal are mainly "terraces, point of views, contemplative areas",[20] subjugating again, as in the Police guidelines, a historic site to a mere esthetic lens.

Figure 2. Fence of the Roman Forum

Decorum

On the 8th of August of 2019, a Roman lawyer, Lorenzo Simonetti, sat on the steps of Trinità dei Monti, and soon after got evicted, receiving a fine and a forced removal of 48 hours from the premises by the local police, in compliance with the recently introduced new policy guidelines. The lawyer contested the decision, but the local administrative court (T.A.R.), reinforced the policy decision, adding that the act of sitting was "not limiting the physical fruition of the steps, but posing an obstacle for the visual enjoyment of the staircase itself".[21] What both the Police guidelines and court are ignoring, in ruling by means of decorum and aesthetics, is the social character justifying the very existence of the Spanish Steps. The staircase, designed by Francesco De Sanctis and completed in 1726, marks the scenographic joint between the slope of the Pincio Hill with the church of the Holy Trinity and Piazza di Spagna. The staircase is conceived in a sculptural way and, rather than encouraging ascent, is designed to make the visitor wish to pause and consider it. "If one tries to ascend from the Piazza di Spagna up the middle of the three flights at its base, for example, one is stopped by the retaining wall below the second of the terraces. To continue, one needs to turn to the sides. The intention must surely have been to encourage the visitor to pause and look: upwards at the Trinità dei Monti and, turning around, down to the city below".[22] In a classical baroque interpretation of the city as the theatre of life, the steps became a stage on which the spectacle of everyday life takes place. Through centuries the stair has been used as a promenade, a space for protests / events / parties / leisure. Nowadays this spectacle of life seems to be contrary to decorum, as the term in recent politics, has been used as a form of social control, along with fear and security. Politics are trying to "legitimate fear, and called out for security, pointing the finger against what it is classified as excessive, dirty, threatening for the order of the common house, the city.".[23] Analyzing the semantics "someone who acts with decorum is someone who stays in the limits, and those limits have to be or at least have to seem, self-imposed. Such boundaries change according to many factors and so analyzing them can reveal a great deal about social control processes".[24] Public spaces, once theatre of many activities, open to possibilities, to mistakes, to dissent, have been reduced or totally secluded, causing the loss of their social impact on the urban context. Control erased certain conditions that a public space must express to have an influence on civic life: being open and accessible to everyone, not secluded, not controlled, flexible and informally available to the different needs of a contemporary community.

Figure 3. Events on the Spanish Steps

Property

The above criteria are sometimes hidden and revealed thanks to mistakes or unexpected actions, as in the case of Piazza Alighiero Boetti. It is an elongated space providing access to the MAXXI complex and re-stitching two main sides of the neighborhood urban fabric, previously disconnected. This square is subject to a generative mistake: the big open space wasn't part of the original design, but the

budget reserved for the museum was enough only for a third of the construction, and so the volume was drastically reduced leaving a void space in between the new building and what was left of the preexisting military complex. Citizens started to use the space as a collective, shared gathering hub. They were conscious of the implicit mistake. “Over there where we spent part of the afternoon there should be one of the branches of the museum. So, they didn’t think of realizing a public space, but it happened, and we spend time here, but it’s not properly a public space. It is closed on Monday.”.[25] The process of appropriation expanded from the open space, where after a while furniture and playgrounds for kids were placed, to the indoor space of the library. It wasn’t meant to be a free public library, but in time students have colonized its spaces, so that after 2 years, the museum stopped charging admission. But even while admitting that “de facto” big portions of the complex are now used in a shared way, the museum management worried about how public interaction could drastically change the original function, and tried to keep the space’s evolution under control. Around the perimeter a fence was built, justifying it by means of property. Additional rules of security were added during the pandemic. But unlike other public spaces which re-opened once the acute phase of the emergency was over, the piazza and library remained unaccesible; entrance was limited to holders of a museum ticket. After two years the citizens decided, in an antigonian act of rebellion, to claim the public interest over the right to property, handing a petition to the municipality and winning the space back.

Figure 4. The MAXXI square

CONCLUSION

In the Maxxi example users made it clear that beyond rules, functional destinations, urban models and property are the actions of individuals and communities and the relations they establish with a place which make it public and shared. A bottom-up practice which is not an isolated event in Rome, but continues to happen, over centuries, as seen at the Portico d’Ottavia, whenever mistakes and their possibilities are put in front of the so called “order” of the rules. When rules force the social lens to be overruled by the aesthetic one, the contribution of a space to the livability of a city, to the creation and the substantiation of a community, is drastically reduced, and public spaces are turned into showcases.

Beyond the urge to over-design and over-control, in the reinterpretation of our historical public heritage priority has to be made for spaces of appearance where individuals can express themselves in all the differences, complexities, mistakes, “laments and triumphs” of contemporary society.
Spaces capable of “induce attitudes rather than imposed behaviors”,[26] conceived and reinterpreted first of all for its users not for its representation, since in the words of Aldo Van Eyck “a city that is not conceived for citizens cannot even be called a city.”

NOTES

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LIVING LANDSCAPES: ADDRESSING CAPE TOWN'S HISTORIC SPATIAL LEGACIES THROUGH ENGAGED ARCHITECTURAL DESIGN STUDIOS

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INTRODUCTION

The final-year studio of the Bachelor of Architectural Studies at the University of Cape Town, framed under the theme *Living Landscapes,* transcends conventional distinctions between 'landscape' and 'architecture'. The year-long studio challenges students to question contextual narratives of Cape Town and engage in contextual and ecologically sensitive design to address Cape Town's intricate histories and current and future spatial needs. The studio emphasises 'poetry and pragmatics' and embeds the core *ethics of equity, ecology, decolonisation*, and *decarbonisation* as design practice. By centring the 'Landscape' as a socio-ecological urban context the studio encourages socio-political and socio-ecological awareness.

The architectural studio is the main pedagogy and a physical space where students engage in project-based learning. Projects range in scope and complexity and are often based on hypothetical contexts and programmes.[1] In contrast, *Living Landscapes* frames projects in real contexts, echoing a "Social Construction Model" that emphasises "relevant scholarship … a sense of independence in design decision-making (and) a sense of applicability to real world problems".[2] Real contexts include real physical sites, as well as real-world socio-political and socio-ecological problems.

We contextualise the *Living Landscapes* studio by sketching the history and current context of Cape Town, then expand on the socio-political and socio-ecological systems that integrate the three studio projects and unpack each of the three projects, *Landscapes of Connection*, *Landscapes of Memory*, and *Landscapes of Need*, to explore a studio pedagogy based in real contexts. We conclude with the studio's impact, outcomes, and transferability.

Figure 1. Living Landscapes Engaged studios: Annual Summer show (top), fieldwork (bottom left), reviews and short film festival (bottom right) (photos by Heidi Boulanger)

BACKGROUND

Cape Town has a complex socio-political and socio-ecological landscape that shapes its urban culture and form. The city's origins and evolution are deeply intertwined with the legacies of colonialism, Apartheid, and the ongoing struggle for social justice and environmental sustainability.

Cape Town's socio-political landscape

The socio-political challenges of Cape Town are rooted in its colonial past. The establishment of a refreshment station by the Dutch was strategically chosen for the abundance of natural water systems, particularly the *Camissa* River, which had sustained indigenous Khoi people for over 2,000 years.[3] The Dutch, and later British, started a history of land dispossession, conflict, and spatial reconfiguration, laying the foundation for spatial segregation that would be brutally entrenched during the Apartheid era.[4]

Under Apartheid, Cape Town was systematically restructured according to racial divisions, a process institutionalised by the Group Areas Act of 1950.[5] This law enforced spatial segregation by designating specific areas for different racial groups, leading to the forced removal of non-white communities from central urban areas onto the periphery of the Cape Flats. These actions resulted in immense urban sprawl, extreme urban fragmentation, and vastly disconnected communities.[6]

District Six is perhaps the most infamous example of this history. Originally a vibrant, mixed-race neighbourhood, District Six was declared a "whites-only" area in 1966, leading to the demolition of over 60,000 homes and the relocation of its predominantly 'coloured' community.[7] Today, District Six remains a stark symbol of Apartheid's spatial injustices—a barren, underdeveloped scar in the heart of the city. (refer to figure 2, top left)

The process of land restitution offers opportunities for urban regeneration and cultural heritage preservation. A key challenge is not only ensuring physical reconstruction but also achieving spatial transformation by reconnecting communities through socio-spatial justice. The District Six Museum emphasises integrated restitution with broader efforts to address the still entrenched effects of Apartheid-era spatial planning.[8] (refer to figure 2, top left)

The legacy of racial division, unequal resource access, and the deliberate exclusion of non-white communities from prime urban areas continue to influence the city's socio-economic structures and are visible in the stark contrasts between affluent, historically white suburbs and the overcrowded,

under-resourced townships and informal settlements that house the majority of Cape Town's non-white population.[9] (refer to figure 2, top right)
As a direct consequence, Cape Town is currently facing a severe affordable housing crisis leaving many residents unable to secure adequate housing.[10] This has led to the proliferation of informal settlements, particularly on the urban periphery, where basic services are often lacking. (refer to figure 2, top right)

Cape Town's socio-ecological landscape

Cape Town's socio-ecological landscape is equally complex with layered challenges. Cape Town is situated within the Cape Floristic Region, one of only six floral kingdoms in the world and a UNESCO World Heritage Site.[11] The region is marked by its unique biodiversity and intricate hydrological systems. However, urban expansion (particularly the extreme urban sprawl across the Cape Flats) poses a serious threat to the ecology and biodiversity.
The city's growth conflicts with its attempts to preserve natural heritage. Cape Town is considered a Biodiversity Hotspot (containing at least 1500 endemic vascular species but has lost at least 70% of its original biodiversity).[12] This loss is a stark indicator of the conflict between urban development and environmental conservation. The loss not only threatens the region's ecological balance but also undermines its life-giving natural services—such as clean air, water filtration, and food production—that these ecosystems provide.[13] Architectural education requires urgent reform towards greater ecological awareness and care. (refer to figure 2, bottom left)
The Camissa River system, which originally drew both the Khoi people and the Dutch remains a critical yet often overlooked element in urban planning.[14] These hydrological systems have been largely neglected, integrating these into contemporary urban planning can create a more resilient, ecologically sustainable city also honouring the water history. (refer to figure 2, centre row left)
Cape Town's socio-ecological landscape is also defined by urban expansion and climate change. A potential food crisis is linked to the future of the Philippi Horticultural Area (PHA). The PHA is an agricultural zone producing a significant portion of Cape Town's fresh produce. It sits over some of the city's most substantial groundwater reserves. As developers look to the PHA for future residential projects, there is a risk that this primary food source will be lost, and water resources may be depleted or polluted.[15] This would exacerbate food insecurity, particularly among lower-income groups and increase dependence on importation, straining the economy and exacerbating inequality.
Cape Town also faces significant climate-related risks amplified by ongoing urban sprawl. The city is increasingly vulnerable to extreme weather events, including more frequent and severe floods and droughts, driven by climate change. The 2017 "Day Zero" water crisis, highlighted the precariousness of water resources and the urgent need for water-sensitive design.[16]

Cape Town's socio-ecological political landscape

The phenomenon of "Ecological Apartheid" is evident in the unequal access to natural resources and green spaces across the city. Under colonialism and later Apartheid, non-white populations were systematically excluded from areas with natural resources, including Cape Town's rivers.[17] Today, wealthier, historically white neighbourhoods enjoy greater access to ecological spaces, while poorer communities have limited or no access. This unequal access highlights the need for more inclusive and ecologically sensitive urban planning. Refer to Figure 3, which highlights the relationship between racial settlement patterns and ecological environments, as well as the clear relationship between race-based urban sprawl of Apartheid and biodiversity loss.

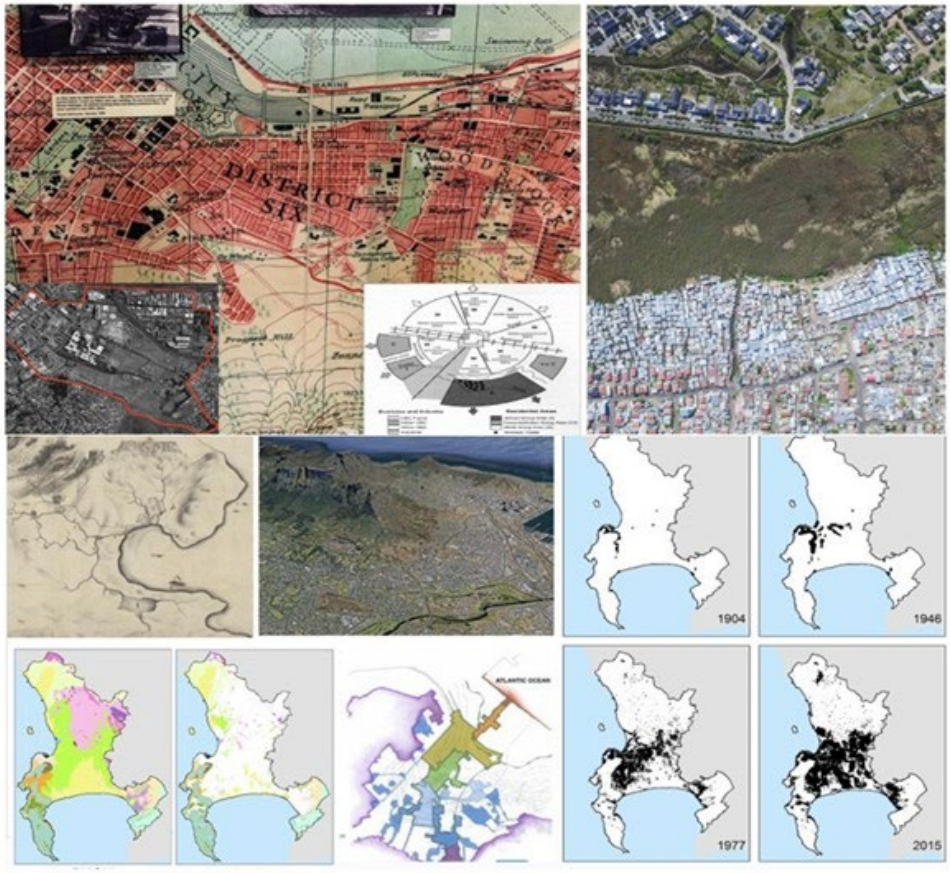

Figure 2. Cape Town's Socio-political and socio-ecological landcape: (top) Apartheid Spatial Planning and forced removals have led to spatial and community fragmentation. (centre) The city's origins around the Camissa river system has been swallowed up by rapid expansion and urban sprawl (a result of Apartheid spatial planning). Bottom: urban sprawl has also resulted in a great loss of blue-green networks and biodiversity sources: (top left to right) Zembylos et al;[18] Miller;[19] (centre left to right) Netherlandsce Nationaal Archief;[20] Google Earth;[21] (Bottom left to right) CoCT Biodiversity Report;[22] von Zeil;[23] CoCT Biodiversity Report[24]

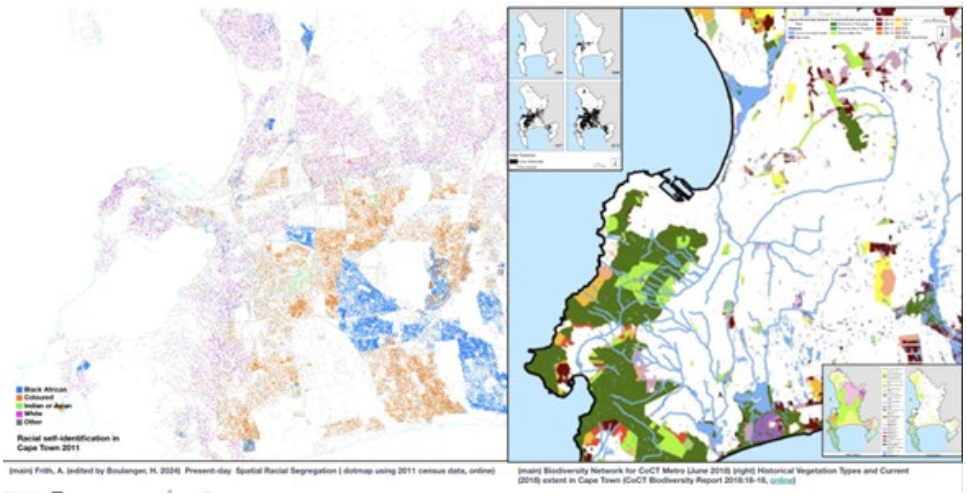

Figure 3. Present-day Cape Town's socio-ecological tensions: apartheid spatial planning persists; housing and mass growth resulting in extreme biodiversity and ecological loss. source (left) Frith dotmap of 2011 Census[25] (right) CoCT Biodiversity Report[26]

ENGAGED STUDIOS AND GREATER SYSTEMS

The *Living Landscapes* pedagogy focuses on the intersections of Cape Town's socio-political and socio-ecological challenges and forces students to work in complex, often uncomfortable contexts that address layered challenges and histories. In centring the landscape, the three studio contexts are connected through Cape Town's blue-green networks, particularly the Camissa river systems, which serve as vital yet somewhat degraded ecological corridors and social-ecological landscapes across the city. These networks, comprising waterways, green corridors, and urban ecosystems, are not just physical landscapes but also contain historical, cultural, and socio-political narratives that link the studio sites and themes. (refer to Figure 4)

Landscapes of Connection is situated in the District Six community and connects to the Trafalgar Park blue-green network (part of the Camissa system) underscoring water as a life-giving force, both socially and ecologically. The design of a recreational community space is directly informed by the need to restore and reconnect the fragmented communities historically disrupted by Apartheid-era spatial planning. *Landscapes of Memory* connects to the Two Rivers Urban Park, a significant node in Cape Town's blue-green network at the confluence of the Liesbeeck and Black Rivers. Students explored how water and landscape have been intertwined with narratives of power, displacement, and memory during Cape Town's early colonial history. *Landscapes of Need* inherently links to Cape Town's broader blue-green food networks. The studio connects to the Philippi Horticultural Area on the city's periphery and inner-city community food initiatives at Khulisa and Oude Molen Eco Village. These locations demonstrate how blue-green food networks can support both ecological resilience and social equity and emphasise the role of water management and sustainable agriculture in resilient urban communities.

Through these interconnected blue-green networks, the studios collectively explore how water, landscape ecology and history shape Cape Town's urban fabric, and encourage thinking that is embedded in the city's greater socio-political and socio-ecological landscapes. (refer to Figure 4 for studio locations and blue-green networks)

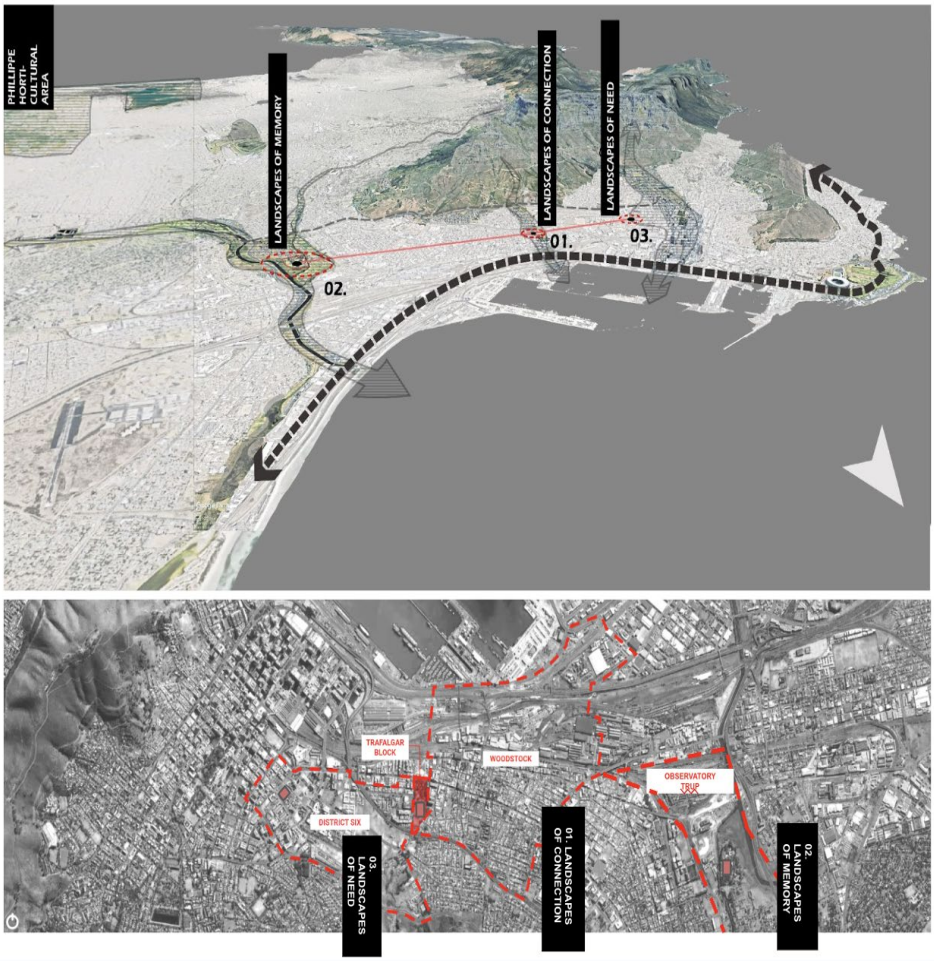

Figure 4. Living Landscape locations in relation to Cape Town's greater socio-ecological urban systems. Source: Authors , compiled using Google Earth,[27] Photoshop PSD (2024)

LIVING LANDSCAPES STUDIOS

Landscapes of Connection: Aquatic Community Centre (Woodstock/ District Six)

The *Landscapes of Connection* studio focused on a water-based community centre at the Trafalgar Park Swimming Pool. The site sits at the intersection of District Six and Woodstock, where a small mixed community managed to survive Apartheid's spatial segregation. (refer to Figure 4, 5 for project context). The studio investigated how an aquatic community centre could be a socio-ecological connection between the 'lost' communities of District Six and the forgotten Camissa River system. The studio emphasised community engagement, encouraging students to delve into the historical and present-day dynamics.

The studio challenged students to address the site's layered histories while designing pragmatic, functional buildings. Designs had to include decarbonised 'superspans' to accommodate large, flexible community spaces and pools. Hyperlocal materiality and forms with resilience to the harsh environments of high-traffic community areas and water-based spaces were encouraged and experientially 'poetic' qualities of water for human experience and health had to be considered.

Students were tasked to re-establish a sense of place and belonging for the community and to mediate its fragmented urban environments. They engaged with urban patterns of segregation and connection and investigated the inclusion of community-based skills and materials to foster job creation. Mapping exercises allowed students to visualise the macro-spatial relationships between the surviving

Woodstock community, the erased District Six, the Camissa River system network and the existing local architectural context. This mapping informed placemaking, massing, placement and orientation, ensuring that the new structure would honour the site's past while fostering a more connected future. (refer to Figure 6 for examples of LOC project mapping)

The design outcomes highlighted innovative approaches to water-based community spaces as social and cultural interventions, aiming to restore a sense of identity and continuity in a place marked by displacement and erasure. Students demonstrated how architecture can play a critical role in healing fractured urban landscapes, reconnecting communities, and re-establishing lost connections to cultural heritage and natural systems. (refer to Figure 6 for examples of LOC student projects)

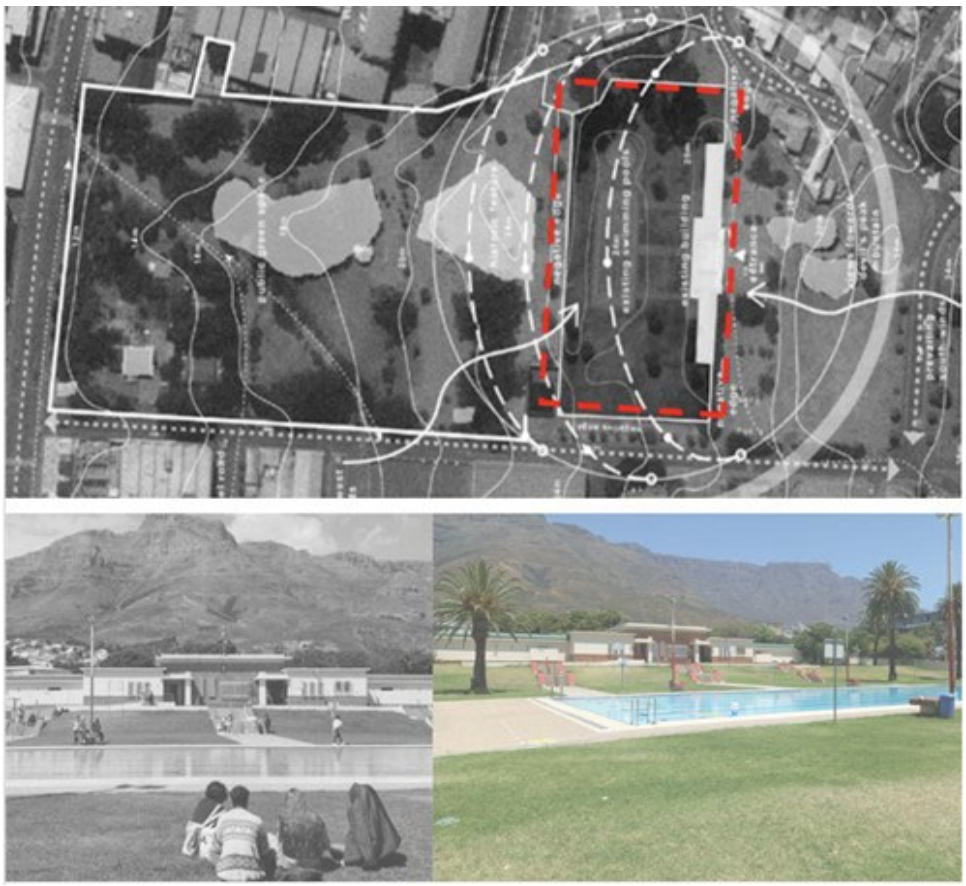

Figure 5. Landscapes of Connection direct studio context: Woodstock, District Six and Trafalgar Park (Intersection of two significant Apartheid-era communities) top map by Tumisho Kekana (Living Landscapes studio 2023); bottom images by Authors (2023), compiled by Authors (2024)

Figure 6. Landscapes of Connection studio outcomes (student work by Thuto Vilakazi, Katryn Groenewald and Siya Ndlovu (Living Landscapes studio 2023) compiled by Authors (2024)

Landscapes of Memory: Decolonial Museum/ Counter-memorial (TRUP / SAAO)

Landscapes of Memory focused on complex, often overlooked histories of Cape Town's urban landscape. This studio challenged engagement with the city's indigenous and colonial past and 'intangible heritage' (invisible history and culture which deeply influences the character of a place.) The studio addressed socio-political heritage and explored the intersection of decolonial memory and environmental sustainability.

The studio asked students to make the 'intangible' tangible by designing a 'decolonial museum' to unearth, commemorate, and contextualise histories and engage the public in active reflection and dialogue.[28] Students investigated settler segregation, colonial hegemony, the marginalisation of indigenous narratives and the degradation of natural landscapes in urban development. Situated at the Two Rivers Urban Park/South African National Observatory, the site contains complex tangible and intangible heritage from multiple 'chapters' of history including being the earliest site of Khoi-colonial conflict and the origin of 'van Riebeeck's Hedge.' (refer to Figure 4, 7 for project context).[29] It became the British Royal Observatory (currently the South African National Observatory) and is at the intersection of the Liesbeeck and Black rivers, with a range of ecological challenges, including floodplains, wetlands, and sensitive natural habitats (notably housing several endangered species[30] and an indigenous bird sanctuary.)[31]

Architectural designs had to include biophilic, regenerative approaches that blend into the natural landscape, act as natural habitat, and draw inspiration from local vernacular and modern sustainable practices. 'Decolonisation and decarbonisation' were emphasised to create structures that were environmentally responsible and culturally resonant. Mapping exercises helped students to visualise

historical and ecological layers. Creatively mapping the ‘intangible’ was critical – and alternative media and mapping methodologies (including lidar, videography, emotive/genius-loci maps) were encouraged. (refer to Figure 8 for examples of LOM student mapping) The project encouraged innovative approaches to memorialisation, less about monumental architecture and more about immersive, reflective, regenerative spaces that enhance the site’s memory. Students demonstrated the potential of architecture to address historical injustices and contemporary environmental challenges while contributing to an inclusive and sustainable urban future. (refer to Figure 8 for examples of LOM project outcomes)

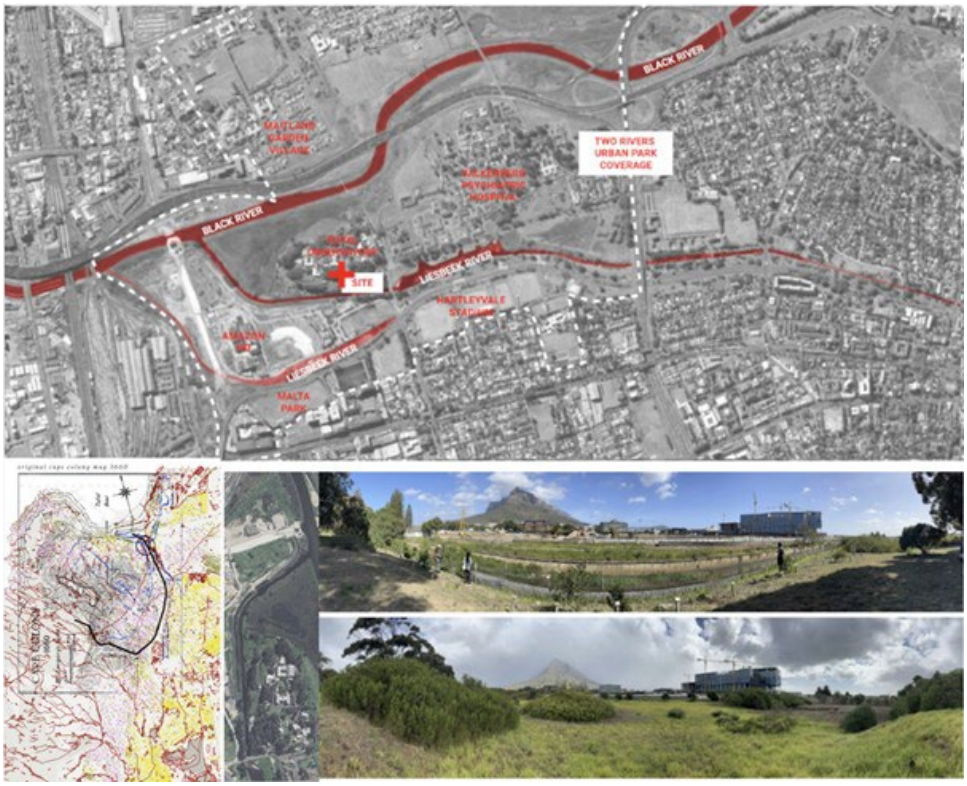

Figure 7. Landscapes of Memory direct studio context: The Two Rivers Urban Park/SAAO Observatory Site (first site of Khoi-Colonial Conflict) top map by Tumisho Kekana (Living Landscapes studio 2023); bottom left map by Heidi Boulanger (2024), bottom images by Thuto Vilakazi, (Living Landscapes studio 2023) all information compiled by Authors (2024)

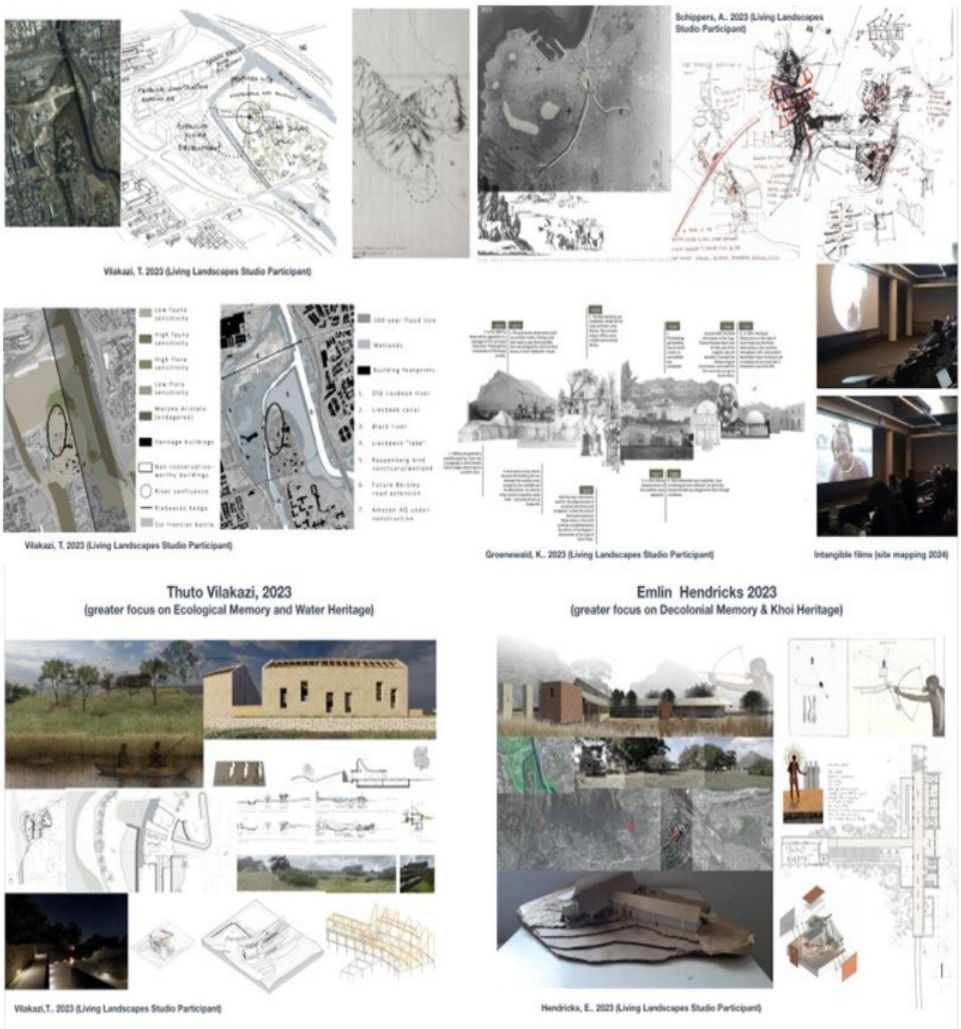

Figure 8. Landscapes of Memory studio outcomes (student work by Thuto Vilakazi, Katryn Groenewald, Aidan Schippers, Emlin Hendricks, (Living Landscapes studio 2023) compiled by Authors (2024)

Landscapes of Need: A New Agri-Housing Typology (Buitenkant Street)

Landscapes of Need engaged with the core issue of future urban resilience, addressing aspects of living, water, culture, and food. The studio was informed by Cape Town's housing crisis which requires a comprehensive approach to provide affordable housing and dismantle the enduring spatial inequalities left by colonial and Apartheid urban planning. Cape Town needs to integrate marginalised communities into the urban core to facilitate access to economic opportunities and provide housing solutions that are inclusive, sustainable, and sensitive to the city's complex socio-political history.

Students had to design solutions for a multi-storey inner-city housing building that addressed greater food security through urban agriculture, economic opportunities, and sustainable building management through circular systems including water and waste. In addition, the nature of what a 'home' is, especially in a post-Apartheid and post-COVID era, and the idea of living sustainably beyond the notion of mere shelter were investigated. The site is at the edge of District Six in the CBD at the intersection of Roeland and Canterbury Streets. It is bordered by a *Food Lovers Market* (selling mostly fresh produce), *Khulisa* (an urban community micro-farm and water recycling plant) and a

community soup kitchen. These entities serve as existing social support structures and the design had to respond to these.

Mapping exercises focused on urban issues to address inequality in and access to the city and its resources. Students researched urban food gardens and agriculture, homeless empowerment programmes and methods of making sustainable multi-storey buildings. Mapping was done collaboratively, and the site was divided into smaller parcels and allocated to student groups. The design had to respond to the neighbouring parcels to define an urban response beyond their immediate site. The project outcome demonstrated the potential of collaborative, contextual design to create resilient and inclusive inner-city housing.

Figure 9. Landscapes of Need direct studio context: Khulisa and the Food Lover's Market housing site (an inner-city site containing a small community-driven urban farm, which has been earmarked for housing by the CoCT) top map by Tumisho Kekana; bottom left map by Thuto Vilakazi (Living Landscapes studio 2023) all other information created and compiled by Authors 2024)

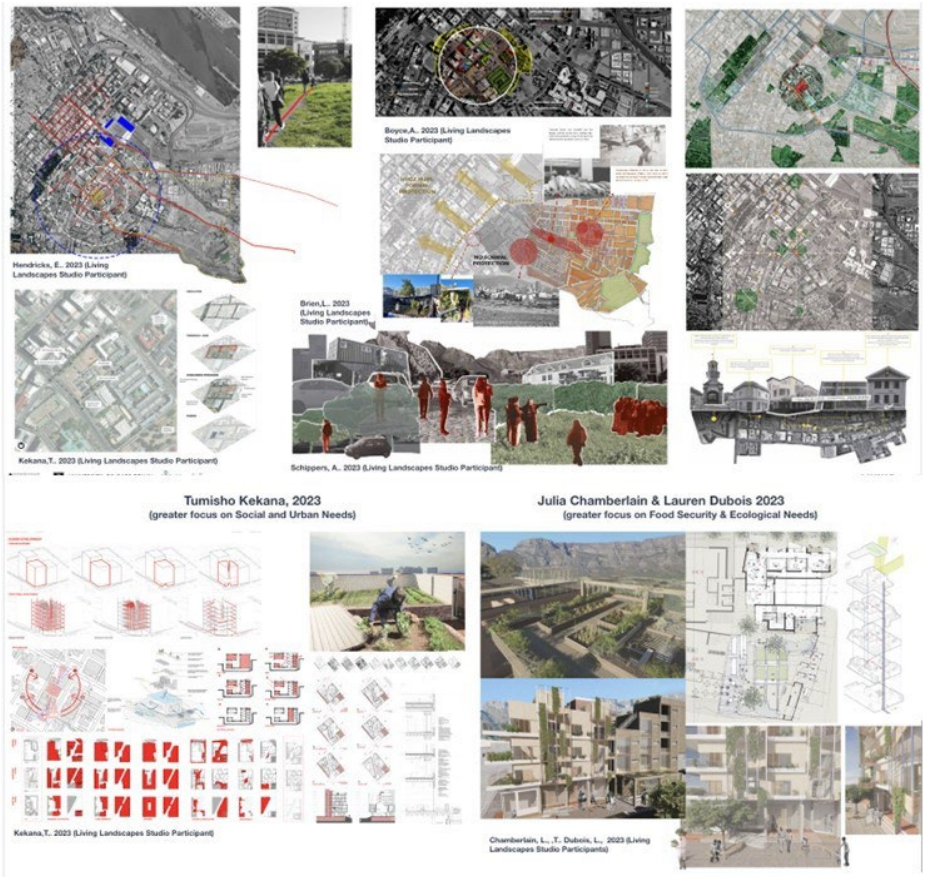

Figure 10. Landscapes of Need studio outcomes (student work by Emlin Hendricks, Tumisho Kekana, Liam Brien, Adrian and Lauren Dubois (Living Landscapes studio 2023) compiled by Authors (2024)

CONCLUSION: NURTURING FUTURE ARCHITECTS THROUGH LIVING LANDSCAPES

Living Landscapes offers a powerful architectural pedagogy that connects Cape Town's historical legacies with contemporary socio-ecological challenges and urges students to envision a more equitable, resilient, and sustainable urban future. By embedding the core *ethics of equity, ecology, decolonisation*, and *decarbonisation* into design practices, these studios encourage future architects to approach spatial design with a deeper socio-political and socio-ecological awareness. The landscape, once peripheral, is now central to the design process, reflecting the interconnectedness of natural systems and human histories.

Public engagement is a vital component of the *Living Landscapes* ethos. Through annual exhibitions, film festivals, posters, and social media platforms like Instagram, the studios' impact extends beyond the academic environment. (refer to Figure 1) This consistent dissemination of information fosters passive awareness and active public participation in Cape Town's spatial issues. By making these ideas accessible, the studios help build a broader societal understanding of decolonial urban planning principles and decarbonised, resilient design.

Architectural education plays a crucial role in urban transformation. *Living Landscapes* hopes to prepare young architects to contribute meaningfully towards solving the many challenges facing South Africa and lays the groundwork for architectural visions to become reality. These inclusive, equitable and environmentally-conscious studios may lead to more nuanced and informed architectural practices in the future, potentially driving real-world change in Cape Town's built and urban form.

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PROMPT AND CIRCUMSTANCE: SYNTHESIZING DIFFUSION MODELS AND LLMS WITH ALEXANDER'S PATTERN LANGUAGE

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INTRODUCTION

Over the past twenty years, a trend in preservation has emerged that ironically undermines the achievements of our predecessors by dismissing their efforts as outdated and irrelevant. This trend signals an existential crisis in the field, as cities and towns across the United States struggle with recognizing and valuing historic places. The rapid advancements in artificial intelligence offer vast opportunities, especially in design and planning. However, the challenge lies in aligning AI's potential with a humanistic vision that synthesizes its "hallucinations" with cultural wisdom accumulated over generations. As our digital cognition becomes increasingly distorted through "deep fakes" and other technologies, our shared narrative splinters, risking further detachment from meaning. Yet, these same technologies can be harnessed as tools for communities to create stronger visions for their lived experiences, enhancing the architectural narrative of their "deep place." The preservation field stands at a crucial juncture: will we use these advancements to deepen our understanding of the past, or will they further detach communities from their built environment? This essay argues for the former. Heidegger observed, "Building is not merely a means and a way toward dwelling – to build is in itself already to dwell."[1] By integrating new digital tools into the preservation process, we can unlock new potentials for community-centered preservation. This includes the authors' exploration of the benefits and shortcomings of OpenAI's ChatGPT 3.5and Anthropic's Claude as brainstorming tools in the development of this essay.[2]

To lay the groundwork for this proposition, we must examine the factors behind the current preservation predicament. Dismissive attitudes toward earlier preservation efforts stem from generational shifts, evolving theories, and changing social values. Younger generations often view the preservation successes of the 1960s-1990s as antiquated, equating them with problematic power structures. New academic currents, such as critical theory, have strongly critiqued traditional notions of historic significance from previously marginalized perspectives. Society's emphasis on progress and innovation further fuels impatience with the past, risking the loss of hard-won victories that protect tangible links to our shared heritage. We should acknowledge the validity of new perspectives while recognizing the substantial benefits of preservation, rather than rejecting the legacy of early preservationists. Historic buildings and places embody a material heritage that retains a lasting capacity to connect communities with their history and identity.[3]

Some scholars argue that aesthetics are entirely subjective, confined to individual perspectives. However, research and experience challenge this notion, suggesting that patterns and their influence on the genius loci of a place offer invaluable insights.[4] This commentary aims to establish the importance of visual order and contextually sensitive design in shaping future preservation policies. By using digital tools to open ideation to all stakeholders, guided by pattern languages, we empower the synthetic imagination harnessed through natural language prompting. Drawing from the work of architectural theorist Christopher Alexander, we explore infill design within historic environments through the perspectives of beauty, wholeness, and harmony, envisioned with new digital resources.[5] To remain relevant in the 21st century, preservation needs new tools and approaches to reconnect communities with the places that matter to them. Emerging technologies like artificial intelligence (AI) are crucial here. AI has progressed immensely, enabling transformative capabilities like generative design. While caution is warranted, incorporating these tools into preservation planning could help communities collaboratively re-imagine and re-inhabit their historic built environments as meaningful places to dwell.

JUST AND COHERENT URBAN DEVELOPMENT

The existential undertones in the heritage field highlight the complexity of challenges faced by cities and towns across the United States. In an era of constant change, simply safeguarding historic sites and buildings is no longer sufficient. Communities must grapple with identity, memory, and the evolving meaning of place.[6] As urbanization advances and historic neighborhoods face development pressures, the need for innovative, adaptable preservation strategies becomes increasingly urgent. Preservation also promotes sustainability through the reuse of existing resources. Conversely, as dense manufacturing centers shrink due to post-industrialization and globalization, cities must reinvent themselves by reversing the consequences of urban renewal over the past sixty years.[7]

A key objective of preservation is to ensure coherent urban development, where new construction integrates with existing historic fabric, fostering continuity and visual harmony.[8] AI-powered design tools, guided by pattern languages and visual order, can help achieve this goal.[9] By analyzing the defining patterns of a historic district or neighborhood, AI can generate design proposals that respect the existing context. This approach minimizes architectural dissonance and ensures new developments contribute positively to the urban environment.

Beyond aesthetics, embracing AI in preservation can significantly impact social and environmental justice. Preservation efforts often intersect with issues of gentrification and displacement. Without sensitivity to community needs, preservation can displace low-income residents and reduce affordable housing. Generative AI tools can address these challenges by facilitating community engagement and participatory design. Involving diverse stakeholders in the design process ensures that preservation benefits are equitably shared. AI tools can also assess the environmental impacts of preservation and development. Additionally, AI, including video production and storyboarding tools, can simulate scenarios to determine the most sustainable options, helping communities make choices aligned with ecological justice.

VISUAL ORDER AND CONTEXTUALLY SENSITIVE DESIGN

In opening preservation design processes to broad community participation through AI, issues of aesthetics and visual character will likely arise. Some may argue that aesthetics are entirely subjective, with beauty remaining “in the eye of the beholder.” This view suggests that disputes over building forms or styles cannot be definitively resolved through reasoned debate, leaving democratic solutions like majority rule as the only options. However, extensive research into cross-cultural aesthetic perceptions challenges this notion, indicating that beauty also exists externally in tangible

arrangements fundamental to human psychology. While personal preferences vary, underlying generative schemata of order independently sustain notions of aesthetics. Neuroaesthetics further supports this, with studies showing that geometric patterns across cultures consistently stimulate the brain's pleasure circuits. Human minds are wired to recognize and appreciate specific visual configurations.

Visual order refers to the arrangement of elements to create a harmonious and aesthetically pleasing whole, encompassing symmetry, proportion, balance, and rhythm. In historic preservation, visual order is crucial for maintaining the integrity and character of sites and buildings. It ensures that alterations and additions respect the original design intent and do not disrupt visual harmony. Cultural patterns also play a significant role in shaping aesthetic preferences. The concept of genius loci, or "spirit of place," suggests that certain landscapes evoke a sense of belonging among people who share a cultural heritage. A historic town square with well-preserved architecture, for instance, may hold special significance for a community as a symbol of collective identity. This attachment to place is not purely subjective but arises from shared cultural narratives and historical experiences.

The existence of aesthetically potent universals does not preclude subjectivity but enables meaningful discourse about beauty. While interpretations of configurations like the golden ratio vary, their near-universal appeal points to a foundational role in collective notions of beauty. Engaging community stakeholders to identify resonant patterns can surface shared aesthetic values to guide preservation design. AI visualization can model such patterns for collective evaluation and refinement, engaging community members in articulating guiding generative logics and approaches.

Contextually sensitive design complements visual order by tailoring architectural interventions to a place's unique historical, cultural, and environmental characteristics. In preserving historic environments, this approach ensures that new construction blends with the existing fabric of a community. It requires a deep understanding of the genius loci and a commitment to preserving the cultural identity embedded in the built environment.

GENERATIVE AI AND PATTERN LANGUAGES

The Promises and Perils of AI

As an augmented design tool, AI holds enormous promise for preservation. Neural networks can rapidly synthesize large datasets encompassing community aspirations, cultural knowledge, and technical requirements to generate design solutions. By effectively amplifying human creativity, generative AI can help communities collaboratively envision context-sensitive infill and adaptive reuse strategies.[10] However, it can be argued that AI-generated designs lack the cultural memory embedded in human-designed places, resulting in rootless environments devoid of meaning. Disconnected and ungrounded from the stabilizing influence of tradition, innovations may run rampant in unsustainable and even unethical directions. Emerging technologies like deep fakes distort truth in the digital realm and threaten to unravel shared notions of authenticity and meaning. Yet others can counter that AI's seemingly limitless generative capacity could positively harness the multiplicity of contemporary perspectives to forge new patterns of meaning. This view suggests that rather than overriding cultural knowledge, AI could potentially expand our modes of perception and creation. The question then becomes: how can human creativity and wisdom actively guide AI capabilities to illuminate heritage values? The answer may lie in part with pattern languages.

Pattern Languages – A Framework for Guided AI

To direct the application of generative AI in preservation and urban design, we need frameworks for synthesizing cultural knowledge. Christopher Alexander's work on pattern languages offers a promising model.[11] Alexander identified timeless patterns that encapsulate the spatial wisdom of

traditional architecture and urbanism, reflecting the knowledge that enables places to promote human life and interaction. He emphasized that patterns only reach their full potential when integrated into a living network—a generative pattern language.

Modern computational power could connect Alexander's patterns into dynamic networks integrated with other data sources, guiding AI in generating context-appropriate interventions. In preservation, pattern languages could structure natural language models to generate meaningful suggestions for rehabilitating historic places. Patterns could bridge AI's imaginative capacity with intergenerational cultural wisdom and locally evolved needs.[12] For instance, the pattern Language of Towns could guide an urban AI assistant in conceptualizing infill interventions that integrate new uses while respecting an existing town's spatial patterns. Rather than imposing past formulas, the patterns would offer adaptable rules for context-specific solutions.

Integrating AI and pattern languages into preservation processes could greatly impact community engagement. Virtual charrettes using interactive AI could connect residents with visualization tools to collaboratively craft and refine design proposals, enhancing stakeholder agency and buy-in. AI and patterns together serve as meta-design tools, scaffolding collective creativity and consensus building. Incorporating visual order and contextually sensitive design into preservation becomes even more relevant in the age of AI.[13] Digital tools can assist by providing architects, urban planners, and preservationists with powerful resources for analysis and visualization. By using AI-powered tools guided by pattern languages, preservationists can ensure that new developments respect the visual order and context of historic sites, analyzing the existing fabric, identifying key patterns, and generating design recommendations that honor the spirit of place.

THE MULTIFACETED ESSENCE OF DEEP PLACE

The Benefits of a New Approach

In an era of rapid technological and social change, preservation faces the challenge of staying relevant to evolving communities while maintaining tangible connections to our past. Adopting an approach that combines AI-driven design tools with principles of visual order and context-sensitive design can greatly benefit heritage preservation. Beyond preserving architectural and historical assets, this approach can positively impact urban development, social equity, environmental sustainability, and community well-being. This requires rethinking conventional methods. Instead of viewing new technologies like AI as threats, we should integrate them into preservation as tools for collective creativity and wisdom. Patterns can link data-driven machine learning with humanistic knowledge. Reframing review procedures to enable participatory design shifts preservation away from cultural conflicts between "progressives" and "traditionalists" and toward inclusive co-creation of interventions synthesizing diverse perspectives, which aligns with the concept of deep place.

By embracing emergent technologies as opportunities anchored in tradition, preservation can restore its cultural legitimacy. Designing within the context of historic settings through community-engaged AI and patterns reconnects places with their present communities. Adapting policies and practices to this approach will ensure preservation's ongoing role in building vibrant, resonant environments. We should face today's challenges not with rigidity or capitulation but with nuanced innovations that harness technology for enduring human values. This is how preservation can thrive in the 21st century.

To reinvigorate heritage preservation through cutting-edge digital technologies like AI and pattern languages, it is crucial to grasp the concept of "deep place." This concept encompasses not only layers of meaning, identity, and historical resonance but also safeguards the tangible material culture that defines a location. Deep place transcends physical attributes. It includes the historic town square

where generations have gathered to celebrate, protest, and mark life's milestones, as well as architectural masterpieces that stand as enduring testaments to human ingenuity.

Within deep place, we find archetypes—universal patterns that resonate across cultures and epochs. These archetypes form the bedrock of our collective conscience, offering timeless significance and a reassuring sense of familiarity. Heritage preservation extends beyond protecting individual sites; it cherishes universal and timeless elements that underpin our cultural continuity.[14] Deep place is the spiritual nucleus of a community, where history and culture harmonize, embodying a people's identity.[15] It also serves as a counterbalance, resisting the negative forces of inhumane development. Preservation transcends mere artifact protection; it safeguards universal patterns and archetypes that anchor us to our cultural essence. In a time of relentless change, deep place provides a stable foundation, guiding identity and offering resilience.

As we harness the potential of digital tools like AI and pattern languages, our goal is clear: to deepen our connection with the many facets of deep place. These tools help unveil hidden patterns, rekindle forgotten stories, and empower communities to articulate aspirations while honoring generational wisdom. In this dynamic process, heritage preservation gains a new dimension—cherishing both tangible and intangible elements of our shared heritage. Through the fusion of digital technologies and deep place, we not only conserve our cultural legacy but also breathe new life into it for the 21st century.

Deep Place As A Framework For Preservation

Deep place preservation recognizes that a place is not static. Place transforms with the people who dwell within it. Preservation efforts that aim to create and maintain deep place go beyond appearance-level restoration.[16] They seek to capture the essence of a location—the stories its people hold, the memories its structures embody, and the cultural significance of their synergy. AI tools and pattern languages facilitate this engagement, enabling residents to co-create and shape the future of their cherished locations.

Incorporating AI and pattern languages into preservation practices aligns with the deep place concept. AI's ability to synthesize data and generate context-sensitive designs can empower communities to engage deeply with their heritage. Patterns, as repositories of intergenerational wisdom, serve as the threads that weave together the tapestry of "deep place." Visual order and contextually sensitive design, combined with AI's capabilities, allow us to preserve not just the physical aspects of a place but also the intangible elements that make it a "deep place." By respecting the patterns of the past and the cultural narratives embedded in a location, we ensure that preservation efforts are rooted in profound insights.[17] When community members participate in the preservation process, they become active guardians of its "deep place," ensuring that preservation efforts transcend the aesthetic and material, touching the very soul of a place and its people.[18]

Implications for Preservation Policy

Incorporating technologies like AI and pattern languages could significantly enhance preservation practices by fostering contextual design approaches that sustain continuity of place while adapting to evolving needs. However, regulatory policies and review procedures pose obstacles to this vision. Strict application of guidelines emphasizing material authenticity and differentiation from contemporary risks constraining possibilities for synthetic design approaches that thoughtfully integrate past forms, present aspirations, and emerging technologies.

Standard preservation review processes are also ill-equipped for interactive community participation using AI-assisted design tools. Typically, developers, owners, and designers prepare design proposals, which historic preservation commissions scrutinize in periodic meetings. This linear sequence

provides limited opportunities for meaningful public engagement or collaborative refinement of initial concepts. Historic preservation commissions also frequently lack diversity, with architectural professionals and longtime residents overrepresented.

Moving forward, regulators and policymakers should expand definitions of integrity and compatibility to accommodate context-driven AI and pattern language-augmented design approaches. Rather than defaulting to frozen-in-time preservation, standards could emphasize maintaining coherence of place through the continual synthesis of localized patterns (deep place).[19] Review procedures could also require processes integrating inclusive community engagement in iterative design development.

The widespread availability of digital visualization and communication tools today enables reimagining review as an ongoing, dynamic dialogue. Historic preservation commissions should diversify membership to represent communities' full demographic and cultural spectra. With public input integrated throughout, boards can shift their role from restrictive oversight to collaborative facilitation. Policies and guidance will need recalibration to fully realize these ambitions. But thoughtful regulatory reforms promise to reconnect preservation with the cultural aspirations of communities while enabling them to shape future interventions in their historic environments.[20]

CONCLUSION

In this essay, we traced the complex factors behind contemporary preservation's existential crisis and proposed a path forward by integrating data-driven generative technologies like AI with traditionalist insights on patterns and beauty. By harnessing AI as a collaborative community visioning tool guided by patterns representing intergenerational wisdom, preservation can rediscover its relevance. Public participation in context-specific design processes reconnects heritage places with the lives of current inhabitants. Adapting policies and expanding notions of integrity and compatibility will be key to overcoming barriers. The concept of "deep place" offers a guiding light, reminding us that a place is not just a space; it's a repository of shared human experience, memory, and identity.

The challenges are immense, but so too are the possibilities if preservation fully seizes the opportunities of our emerging technological age. Preservation can pioneer approaches that resolve tensions between honoring the past and meeting the future. In embracing AI as a guided assistant, we won't forsake our connection to the past; we can strengthen it. The preservation of "deep place" is not just about safeguarding what was but about co-creating what can be—a shared future deeply rooted in our ongoing heritage. With each preservation effort guided by AI and patterns, we honor the legacy of the past while shaping a more connected future.

NOTES

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THE EVOLUTION OF SPRAWL: NEW PEOPLE AND NEW ZONING IN SOUTHERN CALIFORNIA

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INTRODUCTION

Diffuse cities like Los Angeles raise an acute question: is this a new kind of urban-ness, or do we need an entirely new term to describe such sprawling low-density development? In North America, central cities often appear predictable, formulaic, and even boring—urban theme parks with upscale restaurants, unoriginal cultural venues, and housing for the wealthy.[1] Conversely, economic and cultural growth is booming and diverse in what was once considered "the edge," now more accurately termed a polycentric "exurbia." This contradicts the overly homogeneous reputation traditionally associated with these areas. Diffuse urbanized regions have become primary sites of creative production, driven by fluctuating social, economic, political, and spatial changes.

In short, suburbia, also known as exurbia, is no longer sleepy; it is “where the action is. There is abundant evidence to support this claim. Billy Joel hails from iconic Levittown on New York’s Long Island, the Brian Forbes film of Ira Levin’s novel *Stepford Wives* is set in Connecticut, and the New Wave band Devo and lead singer from the Pretenders, Chrissie Hynde, are from and sing about the rustbelt suburbs of Northeast Ohio. Jonathan Franzen’s anxious book *Corrections* is set in a leafy suburb of St. Louis, Taylor Swift is from suburban Philadelphia, and the lowly two-car garage is the mythic birthplace of Silicon Valley. This influential creativity, rooted in the suburbs, suggests that this world is a powerful origin of cultural production.

The Los Angeles Basin and the larger Southern California region exemplify such a culturally productive, spread-out polycentric city. Blessed with a generous climate, it is a center of the aerospace and energy industries and, famously and influentially, the global capital of popular entertainment. However, if you believe Thomas Pynchon’s classic 1966 postmodern novel *The Crying of Lot 49*, LA is also an anxious mess of contradictions and plastic artifice, whose ambulant space and aesthetics are reviled by most and only valorized by the disturbed. That said, Pynchon’s infamous image of the scattered city is slowly becoming obsolete.

Pynchon’s bewildering LA parallels more conventional reactions to the diffuse city that are now criticized for lacking nuance. This tired narrative focuses on suburbia’s separation of functions, ecological unsustainability, and relentless repetition. Most urban theorists of the built environment frame strategies of remediation that valorize the European compact city as a magic solution to combat the ecological liabilities and social isolation of suburbia. The Congress for the New Urbanism (CNU) is the primary advocate of this position. Their usually new-build solutions are composed of historical grammars that create themed environments, recalling a mainly white and Euro-colonial or industrial

past—an image they would have us believe is universally appealing. The CNU developments are indeed attractive to the predominantly white upper and upper-middle economic class. However, their inability to represent the collective identity of other groups and lack of affordable units suggest their strategies are culturally biased and economically exclusionary.

Finally, the CNU asserts that their compact, walkable cities are more ecologically sensitive. Such pedestrian-friendly development relies less on automobiles and is more sustainable, but there is little agreement beyond this. Its very compactness makes it difficult to change. In contrast, the low-density built environment, set in diverse forms of nature, is more flexible; its relaxed shapelessness offers space to alter itself to be more ecologically sensitive.[2]

Against this backdrop, two different forces have begun to transform the exurbs of Southern California. Over the last five decades, significant new arrivals from Asian and Latino nations have brought new values, patterns of daily life, and related spatial practices to the existing, now aging, postwar exurban city. With political agency at the local level, these demographically renewed communities have enacted municipal zoning regulations that encourage further transformation of the original Euro-American community. This represents an informal, bottom-up change that all designers of the built environment should observe as they imagine possible futures for the low-density-built terrain. More recently, to address an accelerating housing affordability crisis, there have been a set of California state-wide top-down initiatives that mandate higher residential density in less compact cities. These have had mixed results due to significant legal and statutory pushback.

Informal Effects of Global Migration

The arrival of immigrants and the urban change associated with their new cultural and spatial practices is nothing new. For thousands of years, cities that adapt to new circumstances and influences prosper. In recent decades, political turbulence, economic opportunity, the global climate crisis, and geopolitical restructuring have driven one of history's greatest eras of migration. This movement of humanity places social, economic, and political stress on the countries and cities of destination. Despite this stress and the common political and cultural reaction against it, this new blood offers innovative ideas, energy, and patterns of life for the recipient nation and urban areas that can enrich and strengthen it.

Historically, the center of North American industrial cities was the initial landing site for new residents. Since the early nineteenth century, the Anglo-American suburb was conceived by its' promoters as an asylum from pollution, crime, and the perceived threats of cultural difference found in inner-city districts. In contrast, since at least the 1970s, new residents have started arriving directly in existing suburban communities, eventually in large enough numbers to transform the character, space, culture, and politics of this iconic built environment.[3]

In 1997, examining the community of Monterey Park east of LA, Wei Li, then an assistant professor of geography at the University of Connecticut, studied this trend and was the first to coin the term "ethnoburb" to describe this phenomenon.[4] Like previous enclaves, these emerging communities are social and economic hubs for new arrivals that are part of a global network of financial and cultural relations connected back to the home nation. These new communities act as outposts, supporting new residents in many ways—from providing familiar culture and informal financial systems to travel networks for back-and-forth immigration, to establishing business connections within the new community and outside regional and global economies.[5]

Wei observed that the first wave of new residents initially transforms the functions and symbolism of the commercial typologies of the communities in which they land (Fig. 1). Restaurants, food markets, and other service functions reinhabit the aging strip malls that border boulevards dominated by the automobile. Typically, aging shopping centers or strip malls are affordable options that accommodate

new and familiar culturally specific businesses catering to immigrant communities. Comprising ethnic restaurants and low-cost retailers, these revitalized shopping spaces are often popular not only with the newer community but also with others outside the enclave. The low overhead, informal character, and ability to improvise inventory and décor allow small businesses to serve their niche market and general shoppers who seek to avoid mass marketing and embrace less predictable local shopping and dining options.[6]

Figure 1. Renovated Retail Buildings in Monterey Park, CA. photo by and courtesy of Chenhao Luo and Zhi Zheng, 2023)

The rise of the ethnic shopping mall is a complex and concentrated version of the ethnic strip mall. Once a venerated staple of postwar suburban culture, shopping malls across North America are dying. Their transformation into ethnic malls is accomplished through similar means: small-scale, often family-owned retail characterized by functional flexibility and cultural spontaneity. Asian malls and Latino mercados, both most often set in renovated spaces, are thriving for the same reasons as ethnic strip malls. They serve specific needs of residents and offer others a lively alternative to shopping in stale, predictable mall environments dominated by large well-known multinational brands. Asian malls, like the Vietnamese Phước Lộc Thọ Mall, also known as the "Asian Garden Mall," in Westminster, California, are not only sites of ethnic retail but also contain social and religious functions (Fig. 2). These settings make them vital public buildings and spaces in their community.[7]

Figure 2. Taoist Shrine, Phước Lộc Thọ (Asia Garden Mall), Westminster, CA., photo by and courtesy of Chenhao Luo and Zhi Zheng, 2023.

Parking lots are another environment where the reconsideration of space occurs. Just like the reconsideration of the lawn in ethnic residential neighborhoods, parking lots represent an opportunity to rethink and functionally complicate the surface—not just for the storage of automobiles but also as shared and dynamic space.[8] Night markets, holiday celebrations, performances, and even sporting and gaming events are examples of inventive social functions for a ubiquitous surface that is normally a highly regulated yet disdained space for cars (Fig. 3). Along with techniques that ecologically remediate these bare fields of asphalt, introducing a creative range of new uses exemplifies enhanced cultural intensity that does not rely on physical density.

Figure 3. Night Market, Phước Lộc Thọ (Asia Garden Mall), Westminster, CA., Facebook, 19 August 2016, https://www.facebook.com/AsianGarden, accessed June 2018, courtesy of Bridgecreek, real estate agency.

When assessing residential space in Asian ethnoburbs, the first impression is that nothing much has changed. Both the Euro-American and Asian ethnoburb are dominated by single-family homes on lawns. Li attributes this to an impulse by the first wave of new arrivals to assimilate. This apparent desire to assimilate may also be driven by an aspiration to acquire an internationally recognized symbol of success and domestic stability—the iconic suburban "American Dream" house.[9] Over time, however, homes in these ethnoburbs begin to reflect cultural transformations to accommodate larger, often multi-generational families and new cultural practices. For example, Vietnamese families in Westminster often expand their homes, adding decorative elements that reflect traditional Southeast Asian architecture and principles of feng shui. This melding of old and new demonstrates a cultural hybridization that sustains traditional values while adapting to a new context. Additionally, these families embrace the car culture of North America, transforming front yards into parking surfaces for multiple vehicles, combing a need for mobility with a space to store and frame a prestigious symbol of material success (Fig. 4).

Figure 4. Typical Renovation, Westminster, CA., photo by author, 2019.

Multiple Natures and the Reconsideration of the Exurban Surface

The renovated homes of Westminster reveal a distinctive attitude toward nature, different from that of the typical Euro-American suburban house. Leo Marx, in his influential book released in 1964, *The Machine in the Garden,* describes the American lawn as emblematic of the need to control nature through technology. In contrast, East Asian American gardens aim to balance and respect nature, reflecting a spiritual belief in humans as part of a larger ecological continuum. This approach leads to the creation of gardens that are aesthetically pleasing and ecologically sensitive, integrating water features, native plants, and traditional garden structures[10] (Fig. 5).

Figure 5. Typical Asian Front Garden Design, San Diego, by Kohei Owatari, 2017, photo courtesy of Modern Zen Garden.

Similarly, Latino ethnoburbs exhibit a blend of natural and cultural elements, combining functional and social uses with garden features that convey deep cultural meaning. Latino lawns and gardens often serve as informal retail and social spaces, marked by low tables, barbeques, and playsets[11] (Fig. 6). These spaces transform private gardens into flexible social environments, where daily life and cultural practices intertwine. In rear yards, kitchen restaurants, daycare centers, small service businesses, and other functions enhance social interaction, transforming private spaces into social interaction (Fig. 7).

Figure 6. Latino Social Front Yards, Los Angeles, photo by and courtesy of Chenhao Luo and Zhi Zheng, 2023.

Figure 7. Barra de Pan, kitchen restaurant, Corona, CA., photo by and courtesy of Clay Larsen, 2020.

These cultural practices challenge the traditional American notion of the lawn as a static, aesthetic feature that promotes privacy. Instead, they encourage a view of residential spaces as dynamic, multifunctional areas that serve ecological, social, and economic purposes. This transformation is not just about aesthetics but about redefining the relationship between humans and their environment, creating spaces that are socially diverse and, in many cases, ecologically sustainable.

Economic Pressure and Political Change

Economic and political factors have driven significant changes in Southern California's exurbs, primarily to address the housing affordability crisis. California's economy, whose GDP is the fifth largest in the world, attracts ambitious people, putting immense pressure on the residential real estate market.[12] In June 2024, according to the California Association of Realtors (C.A.R.), the median cost of a house in the state is projected to be $860,300, making homeownership unattainable for many. Exacerbating this crisis, compared to other parts of the developed world, there has been, and continues to be, a lack of significant government housing policy in the United States.[13]

Twice in the last decade, California passed state-wide legislation to increase housing inventory by leveraging the real estate market. The initial set of laws, passed in 2017, prohibited local jurisdictions from banning auxiliary dwelling units (ADUs). Assembly Bill 2299 (AB 2299) and Senate Bill 1069 (SB 1069) allow homeowners to build additional residential units on their property, such as garage conversions or backyard cottages. This initiative aimed to provide more rental options and make homeownership more affordable by generating rental income.[14] Competitions like the "Low Rise Housing Ideas for Los Angeles" have explored the potential of this practice, demonstrating innovative

solutions for increasing density without compromising the character of existing neighborhoods [15] (Fig. 8).

Figure 8. Site Axonometric, for Low Rise: Housing Ideas for Los Angeles competition, 2021, drawing by and courtesy of Kevin Daly Architects.

In 2021, a second major law, California Senate Bill 9 (SB 9) mandated the ability to subdivide single-family lots into two parcels with up to four units each. This legislation aimed to provide the "missing middle" of small to medium-scaled residential typologies that are dense yet compatible with existing neighborhoods.[16] By enabling higher density within established communities, SB 9 sought to alleviate the housing shortage and promote more inclusive urban development.

Impediments and Resistance

While the 2017 ADU laws have been relatively successful, SB 9 has faced significant resistance. Many communities have created new development and design standards to prevent its operation, making the costs of subdivision and development prohibitively expensive for average homeowners.[17] Local governments have mounted legal challenges against the state to avoid compliance, with a court in Los Angeles recently declaring SB 9 unconstitutional.[18] This resistance highlights the challenges of implementing top-down policies in the face of local opposition and entrenched interests.

In contrast, the informal urbanism of Latino and Asian ethnoburbs seems to transform the diffuse city more effectively if not more discretely. These bottom-up changes, driven by community needs and cultural practices, and seem to have a more immediate and tangible impact on the built environment. While government policies are necessary to address broader structural issues, the informal adaptations of ethnoburbs offer valuable lessons in flexibility and responsiveness. Hyper-Local Zoning, where small groups of adjacent parcels can change zoning regulations, is gaining momentum as a less disruptive approach, allowing for more organic and community-driven development [19] (Fig. 9).

Figure 9. Existing vs. Proposed Zoning, drawing by Prajwala Gaddalay, Chenhao Luo and Xinyu Tang, 2020-2022.

Summary

Euro-American culture and spatial practices will remain influential in Southern California and other diffuse metropolitan cities in North America. However, like any city some form of exurbia, with its mix of urban and natural contexts, will persist and evolve. Immigration and associated cultural practices offer a promising future for these low-density environments. Targeted government efforts to diversify the built environment have met mixed results, but informal, bottom-up urbanism shows greater potential for transformation.

As we experience an era of mass global migration, the cultural diversity in Southern California's ethnoburbs offers an adaptable example for other diffusely urbanized areas. The future is diffuse and culturally fluid, with territorial scaled cities like the LA Basin likely to prosper if they embrace this reality. The organization of space reflects a way of life, and recent transformations in Southern California indicate a shift towards more culturally and spatially diverse, socially healthy urban environments. Whether this constitutes a new kind of urbanism or requires a new word to accurately describe it, the results of cultural diversity in the ethno-exurbs offer a model for the future of diffuse urbanized areas worldwide.[20]

CONCLUSION

The changing landscape of Southern California's exurbs exemplifies the dynamic interplay between global migration, cultural diversity, and urban development. The transformation of these communities, driven by informal practices and innovative policies, challenges traditional notions of urbanism and offers a glimpse into the future of low-density urban environments. By embracing cultural diversity and promoting flexible, community-driven development, cities can create more inclusive, sustainable, and vibrant spaces that reflect the complex realities of contemporary urban life.

The evolution of Southern California's ethnoburbs demonstrates that cultural diversity is not just a demographic phenomenon but a powerful force for urban transformation. These communities, with their innovative use of space and resources, offer valuable insights into how cities can adapt to changing circumstances and thrive in the face of global challenges. As we move forward, it is essential to recognize the potential of informal urbanism and support policies that promote inclusivity and sustainability. By doing so, we can create urban environments that are not only resilient and adaptable but also rich in cultural and social diversity.

The future of urbanism lies in understanding and embracing the complex and multifaceted nature of cities. Southern California's exurbs, with their unique blend of cultural influences and innovative practices, provide a compelling model for reimagining urban spaces. Whether this is a new kind of urbanism or something entirely different, the lessons learned from these communities can help guide the development of more inclusive, sustainable, and vibrant cities worldwide.

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DIALECTIC BETWEEN NATURAL AND INDUSTRIAL SITES: IN POST-EXTRACTION MINING REMEDIATION PROJECTS

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INTRODUCTION

The development of the Earth art movement, consisting of large-scale works made directly within the landscape using natural materials, emerged in the late 60s, challenging artworks as self-contained objects. It coincided with the public's aesthetic to toxic concerns over extracting nonrenewable resources. Thus, the industrial landscapes, in particular, offered the opportunity to address a symbiotic relationship between art, manufacturing processes, and ecology and to draw attention to concerns over extracting non-renewable resources. However, many environmentalists wanted to reestablish the landscapes to a state before industry began working on them. Robert Smithson, a pioneer of the Earth Art movement in the early 1970s, rejected the idea of returning to a perfect past and was not interested in restoring industrialized sites to their pre-mining condition. Instead, he advocated for artists to collaborate with industry, developing an art consciousness rooted in actual production and reclamation. He also promoted the idea of earth art becoming a visual resource that mediates between ecology and industry. Over time, some earth artists have chosen to ignore the irreversible changes brought about by human activity on the landscape. The public perceives landscape transformations by extraction industries as ecologically unsound and visually detrimental, thus usually opposes the industry's practices. However, removing traces of the site's history not only masks our standard practices and hides our implicit endorsement of an activity that contributes substantially to our standard of living but also misses opportunities for inspiration and creativity.

Robert Smithson’s Broken Circle/ Spiral Hill

It was Robert Smithson’s lesser-known second earthwork, Broken Circle/Spiral Hill, located in an almost depleted sand quarry with a body of water that intended to address the relationship between art, manufacturing processes, and ecology. Smithson explained that he was drawn to the site because it stood out in contrast to the flat polder landscapes dominated by grids of canals in the central Netherlands. The site was unusual in a predominantly pastoral and meticulously cultivated country.[1] The art earthwork was produced in the context of that year’s version of Sonsbeek Beyond the Pale, an international art exhibition held in various locations across the Netherlands that ran throughout the summer of 1971. Smithson selected an area in Emmen, in the Northeastern part of the country, to create the Broken Circle/Spiral Hill earthwork. He found the site intriguing because it contained loose debris and rocks left behind by a glacier and an operating quarry, which was in operation until its closure in 2018. Shaped by geological processes and human activity, the area was filled with

aquamarine water, against which bulldozers, mining equipment, and large dredging machinery could be seen. The site thus aligned with Smithson's preference for the rugged appearance of post-industrial landscapes, his interest in artist-industry collaboration, and his belief in earth art serving as a bridge between ecology and industry. A large circular shape with a diameter of 140 feet, configured by land and water, divided by the shoreline, *Broken Circle* features a curved jetty that extends into the water, giving the impression that it was carved entirely from the land, separating the two halves of a complete circle. Proportionally too small to impact the Emmen landscape, *Broken Circle*'s concentric form focused on itself and the boulder in its center. By failing to establish a visual link to the actual site of extraction, Smithson's advocacy for innovation and art consciousness rooted in actual production and his rejection of the environmental concern for the destruction of nature didn't find a clear and strong expression before fate cut his life short.[2]

Figure 1. Robert Smithson Broken Circle/Spiral Hill.

Adjacent to Broken Circle, Smithson created a second earthwork on a bank called Spiral Hill. This 75-foot-in diameter base black soil cone with a path of white sand that winds counterclockwise to the top was conceived as an independent work. However, it also served as a viewing platform for Broken Circle, enhancing the interconnectedness of the two earthworks and providing viewers with a unique perspective on the landscape.

Robert Morris Johnson Pit 30, 1979.

Smithson had concerns about the involvement of ecologists due to their desire to restore the original landscape before industrial extraction began. On the other hand, artist Robert Morris's creation of Johnson Pit No. 30 in 1979 brought more attention to the environmental damage caused by industry. Out of seven artists invited to propose artworks for disused or abused sites in the Seattle-King County area, the Kings County Arts Commission selected Morris's work for a demonstration proposal, and organized a symposium to discuss the implications of the project.[3]

Yankee Johnson, the then-executive director of the Arts Commission, outlined two goals for the project: "On the one hand, the commission would enlist artists to propose earthworks that would introduce the work of contemporary artists to the Northwest. On the other hand, earthworks would be used for land reclamation and could offer cost-effective alternatives to traditional reclamation methods." [4]

Morris cleared an abandoned 3.7-acre gravel pit and excavated the shallow depression into a deep terraced crater. Bulldozers sculpted the site's configuration into that of a strip mine—a form associated not with gravel mining but with the extraction of coal or metallic ores. The remaining row of charred tree stumps on the slope at the northwest edge of the pit was blackened and preserved with coal-tar creosote, creating a "ghost forest" that framed the crater, conveying a sense of environmental catastrophe and intended to serve as a stark reminder of the forested land that had been lost due to the area's use as a gravel pit.

One year after it was finished, the earthwork sparked much controversy. Deloris Tarzan, a critic from The Seattle Times, pointed out that the piece of public art had received numerous complaints saying it looked like a strip mine and that the artist's attempt to reclaim the site had caused denudation instead of renewal. Although these critiques were arguably valid, Morris believed that the larger purpose of the piece was to highlight the implications of an overall ecological crisis. Morris expressed concern about the idea of art's success in the public sphere being tied to its use and function, observing that public art often tended to be "G-rated entertainment" – charming and whimsical but catering to a "middle-brow" audience by bringing mediocre art to the masses and questioned whether art served to erase "technological guilt" and thus socially redeem those responsible for damaging the landscape. In 1980, Morris was clearly concerned about environmental impacts of extraction, including "changes in the atmosphere" and "climate changes," which were not common concerns at the time of the work's completion. [5]

Figure 2. Robert Morris Johnson Pit No. 30

Michael Heizer's Effigies Tumuli 1983-85,

Providing a good example of the emphasis on the visual and re-integrating a damaged landscape into the everyday while ignoring the extraction history, is the construction of the Effigies Tumuli sculptures, a group of five huge earthen mounds shaped like animals in Buffalo Rock State Park, designed by artist Michael Heizer. The park was built in an abandoned coal mining area on a sandstone bluff overlooking the Illinois River.[6] During the 1930s, the property underwent coal surface mining, leading to significant environmental damage. Due to its proximity to Buffalo Rock State Park in Illinois, the area was earmarked as a top reclamation priority. The land was re-contoured, the acid water was treated and neutralized, and the soil was treated with limestone. One of the project's goals was to reintroduce wildlife into the area using unpolluted soil and encourage the growth of healthy grasses. Michael Heizer was offered and accepted the commission in 1983.

All earthen mounds and animal figures are made of compacted earth seeded with various grasses. Heizer's specific choice of animals was, informed by his belief that the selected animals would be among the first to re-inhabit the rejuvenated site. The effigies figure a 685-foot-long water strider, a 350-foot-long frog, a 650-foot-long turtle, a 220-foot-long catfish, and a 2070-foot-long snake thatrecall similar animal earth-constructed forms by the Native American cultures of the upper mid west.[7]

Figure 3. Michael Heizer Catfish and Frog. Effigy Tumuli

To varying degrees, their actual siting was adapted to the existing topography of the land; the frog, for example, was suggested by the shape of an existing hummock, and the water strider and catfish cap broader, flatter slopes compatible with their shapes. This adaptation was not merely a practical consideration but a deliberate design choice to harmonize the sculptures with the natural environment, enhancing their aesthetic appeal and creating a unique viewing experience.

To control earth-moving costs and coordinate the earthwork with the state engineers designing enormous drainage systems throughout the property, utilizing the accumulation of material already on the site was critical.[8] The animal sculpture mounds fit well into the topography: the first three repose solemnly atop the bluff, while the turtle and the snake both seem to plunge the escarpment to the river as if launching into the water.[9]

Reminiscent of the vast, large-scale geoglyphs that depict living creatures, stylized plants, and imaginary beings on the desert floor of Peru's Nazca Valley, the effigies are, however, different in being three-dimensional and, except for the snake, all others exceed the viewer's height. The Indigenous figures in the Nazca Valley replaced the natural ground that still surrounds them, but the Effigies Tumuli, by contrast, buried industrially induced erosion; what they celebrate is the ability to reclaim and restructure the materials of the earth without leaving a trace of the past.

Charles Jencks Northumberlandia Garden 2008

In a similar vein to the Effigy Tumuli in terms of placing an iconic form on the land with little regard to the site's specific history is Landscape designer and historian Charles Jencks's designed *Northumberlandia Garden.* Opened in 2008, located next to the estate of Blagdon Hall, Northumberland, UK, while it was still in a coal mining operation, the earthwork was built on an adjacent location. using 1.5 million tonnes of waste earth from the open-cast site. The work rises 112 feet at the highest (roughly 35 m) and about 1312 feet (400 m) or nearly a quarter mile long, it is a kind of goddess lying on her back, with her hair spread out, her body lying horizontally with the face and torso facing up, and her lower torso twisted towards her left as if she was dancing. Like Heizer's animal effigy figures, the northern earthen goddess denies the immediate industrial origins of the landscape, becoming, as critic Tim Waterman, "not a way of working with the landscape but rather on the landscape" and therefore, a destructive concept-enslaved art imposed on it. [10]

Figure 4. Michael Heizer Catfish. Effigy Tumuli

Maya Lin's Storm King Wavefield, 2009

While Heizer's designed animal effigies and Jencks goddess of the north were or are decipherable as figures from the air, the *Storm King Wavefield*, designed by artist and architect Maya Lin in 2009, is due to the abstract nature of the waveform, less clearly identifiable. Stretching across 240,000 square feet of land in upstate New York—, the *Storm King Wavefield* consists of seven rows of grass-covered mounds, or waves, set within a shallow basin at the Storm King's Art Center's southern edge.[11] Like the Heizer's *Effigies* and Jencks *Lady of the North*, Lyn's waves are set on an excavation site, a gravel pit untouched since Storm King's founding in 1960. By utilizing at least 60 percent of the existing gravel from the pit, the remainder of the sculpture involved adding organic topsoil and covering it with local sustainable and organic grasses so that, as in the Northumberlandia Garden and the Effigy Tumuli, there is no trace left of the history of the site.

Figure 5. Maya Lin Stormking-wavefield

Agnes Denes Tree Mountain 1995

Like the previously analyzed earthworks artist Agnes Denes, Tree Mountain was envisioned as a way to rehab land destroyed by former Pinzio gravel pits near Ylöjärvi, Finland, but unlike them, it is also an ecological statement. *Tree Mountain* is a wooded elliptically shaped cone artificially constructed landmass that stands 125 feet tall, almost 1400 feet long, and more than 885 feet wide. Constructed between 1992 and 1996, it was planted with eleven thousand trees by eleven thousand people from all over the world according to a mathematical formula; the oval mountain looks from above like a giant fingerprint made up of whorls of trees.[12] The pine trees that rise from the mountain were planted by various individuals, who then became their caretakers. Each received a certificate affirming their ownership for the full 400-year duration of the project. Highlighting the ecological importance of trees that are meant to develop, eventually creating an old-growth forest that will reduce erosion, *Tree Mountain* provides wildlife habitats, and boost oxygen production

Figure 6. Agnes Denes Tree Mountain Project

Agnes Denes' work embodies, in the view of philosopher Emily Brady, the very idea of ecological harmony, aiming to establish a relationship between human and non-human nature that is based more on the latter than human interests.[13] Yet no trace of the gravel pit that *Tree Mountain replaces* is visible, and it is therefore only through articles or books that we find out about the area's past or reclamation aim.[14]

Martha Schwartz McCleod Tailing Reclamation Project 2000

As opposed to *the Tree Mountain Project, Mccleod Tailings Reclamation Project* acknowledges and pays homage to its industrial past. Designed by landscape architect Martha Schwartz in partnership with Barrick Gold, the project aimed to transform a degraded landscape produced by gold mines that lasted until July 1970 when to the drop in gold market value forced their closure. Sculpting the tailing piles into a curvilinear designed earthwork that the office named the Gold Scroll, the art form was intended to contrast with a very flat and monotonous natural landscape and become a cultural artifact, highlighting the location and role of mining in the town's life. Construction was completed in 2000. [15] Earth-moving equipment and turning radii provided the guidelines for the grading plan and the final shape of the earthwork. According to Schwartz, the project's primary objective was to balance the cut and fill of the earthwork and maintain a maximum total earth moving of 150,000 cubic meters. The final form holds 15 to 30 centimeters (six to twelve inches) of topsoil to help in the revegetation with golden-colored native grasses requiring no watering and able to thrive in polluted soil.[16] Located

across the landform is the only remaining mine's head frame giving visitors a sense of past activities on the site from the top of which views of the closed mine, tailings, and sculptural forms can be obtained.

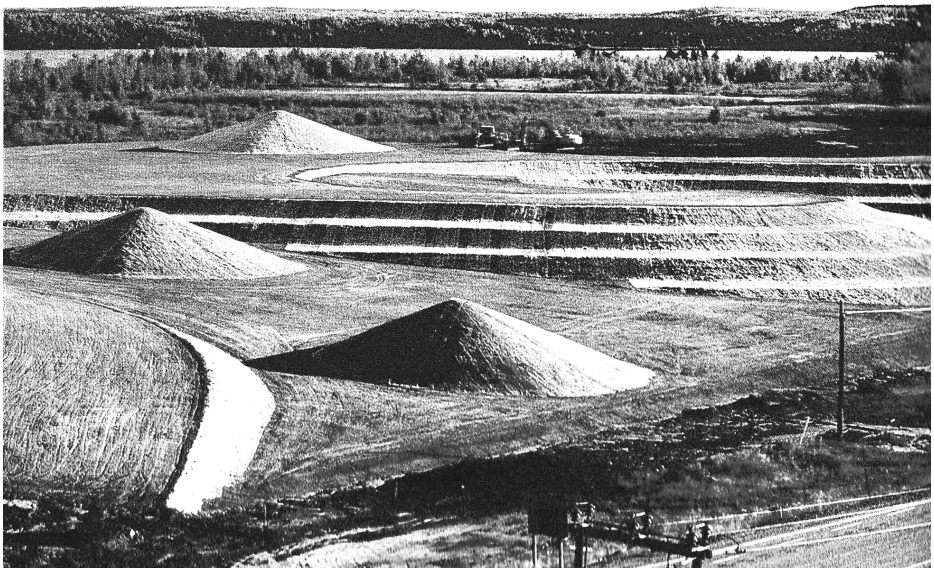

Figure 7. Martha Schwartz, Geraldton Reclamation Project

The ideas of the large steps for mining a landscape can be read as the reverse mold from the stepped open-pit landscapes such as, for example, the Bingham copper mine in Utah. It is as if one such mine had been filled, removed, and placed in reverse on a flat surface. The composition also includes conical hillocks that suggest slag heaps.[17] Schwartz is accused of being aggressive and contrarian, or willfully obscure.[18] The *McLeod Project* is, however exemplary, a reclamation project established to regenerate through the addition of 6-12" of peat topsoil and planting of native grasses the ecology that had been disrupted by mining and designed not to fit with nature that makes clear reference to its industrial origins.

CONCLUSION

The earthworks discussed in this paper represent various approaches to form making; they range from clearly identifiable figures such as the animal effigies to creating more abstract figures. Most of the earth-art projects executed in landscapes that were subjected to transformations due quarrying or mining produced after the pioneering work of Robert Smithson and Robert Morris with the exception Martha Schwartz McCleod Tailings reclamation project do not engage with the recent extractive histories of the site and are only incidentally site-specific.

Ignoring the history of extraction sites may be justified by the desire to conceal the environmental impact of our civilization has caused and reflects perhaps a sense of desperation in response to the ecological disruption caused by our pursuit of comfort. However, as artist Robert Smithson argued when the earthwork movement began, industrial extraction processes have a kind of "primordial grandeur," and that the process of can be reversible to some extent. "The thoughtful incorporation or layering of historically built fabric into proposed work not only informs the viewer about environmental changes, but also encourages reflection and can create stunning visual effects. Additionally, retaining elements of the industrial landscape provides the opportunity for miners to value and remember their working environment, a strong part of their identity.".

The *McLeod Project* by Martha Schwartz shows that it is possible to develop an exciting approach to reclaiming a landscape while acknowledging and working with the industrial remains. The process of remaking landscapes after extraction is a massive undertaking that requires significant effort and funding, with typically, government and public involvement becoming necessary to make it happen. Therefore, any earth-work projects that succeed in materializing are truly remarkable achievements, and criticism is understandably rare. However, future efforts can learn from past experiences and create work that is visually exciting, creates a new place for people's activities, is grounded in the geological and extractive history of the site and support the identity of people who worked and or lived in the area the ecosystem, and sustainability.

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PRECAST CONCRETE IN THE INDUSTRIALISATION OF CONSTRUCTION: A CASE STUDY OF THE UNIVERSITY OF SÃO PAULO RESIDENTIAL COMPLEX

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INTRODUCTION

The industrialisation of civil construction offers numerous benefits, including stricter quality control, reduction in material wastage, and increased agility in project execution. Prefabrication, a key aspect of this industrialisation, focuses on producing components with predefined quality control, as defined by Brazilian technical standards. process can occur both on-site and in external manufacturing units.[1] Despite its potential advantages, the efficient implementation of industrialisation in construction necessitates meticulous planning, particularly regarding project compatibility and the logistics of storage and transportation of parts. In Brazil, prefabrication has not been widely adopted in housing construction. A notable exception is the University of São Paulo Residential Complex (CRUSP), built in 1961. Designed by architects Eduardo Kneese de Mello, Sidney de Oliveira, and Joel Ramalho,[2] CRUSP was the country's first reinforced precast concrete building with multiple floors, located on the Butantã campus - Figure 1.

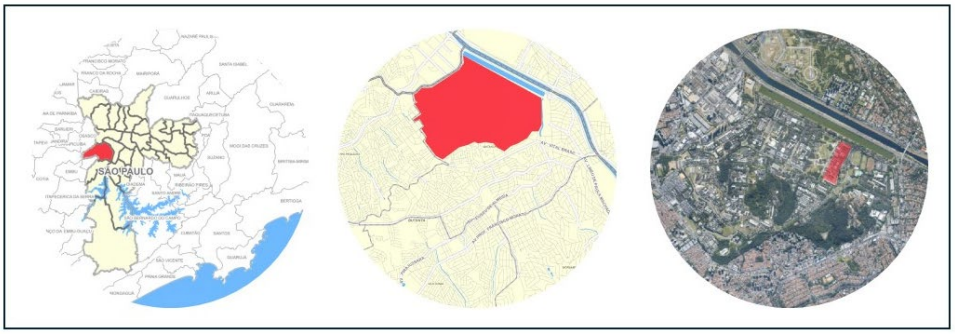

Figure 1. Location of the CRUSP by the authors over the City Hall of São Paulo.

In Brazil, most reinforced concrete prefabricated construction systems are used in buildings intended for industrial, institutional, commercial, and service uses, due to the financial interest in completing the work more quickly, one of the main benefits of industrialised construction. The lack of political support represents a major obstacle to the dissemination of prefabrication in the country, as there is an economic interest in maintaining conventional construction techniques, aiming for extensive labour

absorption. Moreover, Brazil's tax system is one of the main challenges that make this technique more expensive and unfeasible.[3]

Another obstacle is the fear among architects and students of reproducing monotonous architecture, similar to European housing estates from the post-war period.[4] This depreciative characteristic of architectural language has become a stigma attributed to prefabrication. In the Brazilian context, that industrialised construction is not, in principle, linked to the neglect of the project's aesthetic quality.[5]

Given the difficulties encountered in Brazil, national construction industries did not develop and remain outdated compared to those in other countries, such as the United States, Canada, Finland, Germany, and Japan, especially in residential use. This study aims to document and analyse the CRUSP construction system to enrich research on the evolution of the technologies used.

The methodological procedures adopted include a literature review, consultation of archives, as well as the preparation of redrafts and analyses of the applied structural system. The results obtained highlight the importance of recording and analysing this construction system, promoting research on technological advances. These records are fundamental for understanding the transformations in the construction industry and their impacts on contemporary production, especially when based on high-quality architectural references.

OVERVIEW OF PRECAST REINFORCED CONCRETE IN BRAZIL

The reconstruction of post-war cities in Europe facilitated the spread of prefabricated systems. In Brazil, however, the adoption was later. The first major work with precast reinforced concrete was the Gávea racetrack in Rio de Janeiro, in 1926. The meticulous planning of the construction site ensured efficiency in execution.[6]

The Vargas Era marked the beginning of industrialisation in Brazil, with investments in state-owned companies, primarily in the Southeast. In this context, Brazilian architects adopted the guidelines of the Modern Movement discussed at the International Congresses of Modern Architecture (CIAM), promoting prefabrication to integrate function, aesthetics, construction technique, and economy.

In the 1950s, Eduardo Kneese de Mello saw prefabrication as a solution to the housing deficit, designing single-family homes in São Paulo with prefabricated concrete components in his industry, Uniseco S.A., which closed a few years later due to financial and operational issues.[7] Despite this, Kneese de Mello continued to support prefabrication, playing a crucial role in the development of industrialised construction in Brazil, with his partners Sidney de Oliveira and Joel Ramalho.

This initial phase of prefabrication in Brazil was mixed, combining artisanal work with non-industrialised processes due to the lack of demand for modulated components in the local industry. Although it did not generate large-scale production, it initiated debates on the advantages and challenges of reinforced concrete prefabrication in the country.

Initially predominantly used in the construction of warehouses, the second phase of prefabrication in Brazil brought various buildings that employed this system, expanding options in the construction market. The analysed student residence complex stands out.

Currently, prefabrication in Brazil is in a mature stage, with systematic application in the production of buildings and infrastructures in reinforced concrete. The state of São Paulo leads, housing hundreds of industries. In the 21st century, companies have diversified their offerings to include special and customised projects, modifying and adapting forms for buildings in the areas of health, education, and commerce. This has contributed to removing the visual standardisation stigma of reinforced concrete prefabricated buildings, valuing their aesthetic impact on architecture.

UNIVERSITY OF SÃO PAULO RESIDENTIAL COMPLEX

The CRUSP comprises a reinforced concrete prefabricated system and other lightweight industrialised components. The complex consists of twelve six-storey blocks elevated on pilotis, arranged alternately along an axis marked by a circulation marquee - Figures 2 and 3.

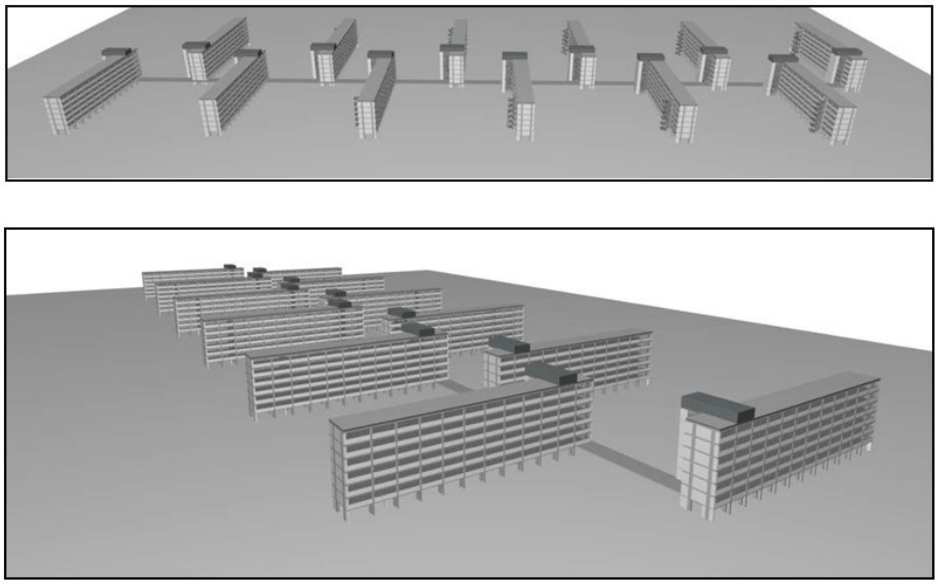

Figure 2. Perspective of the CRUSP by the authors

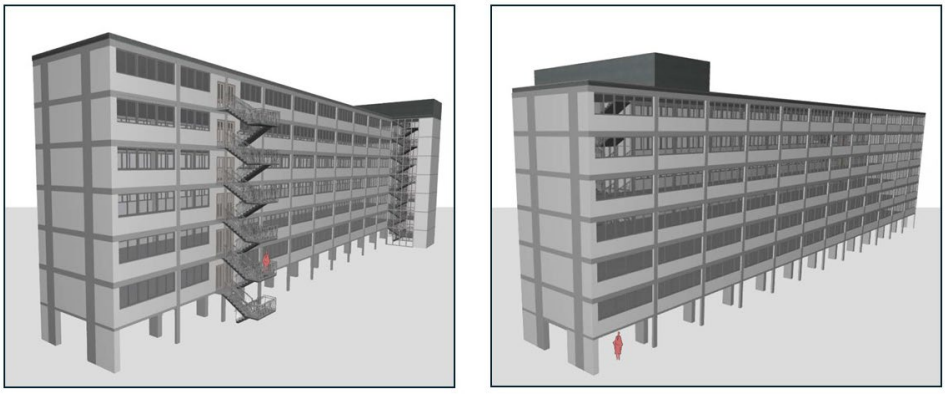

Figure 3. Perspective of one of the CRUSP buildings by the authors

This design approach reflects a modernist architectural ethos, emphasizing functionality, modularity, and efficiency in construction. The elevated pilotis not only enhance the building's aesthetic by creating a sense of lightness but also provide open, flexible ground-level spaces that can serve as communal areas or facilitate circulation. The alternating arrangement of the blocks along the axis ensures spatial diversity and promotes natural ventilation and lighting throughout the complex. Meanwhile, the circulation marquee acts as a unifying element, seamlessly connecting the blocks and offering sheltered pathways that enhance the user experience. This thoughtful integration of industrialized components and spatial planning demonstrates a commitment to both practicality and architectural innovation.

Inspired by Brasília's superblocks, the architecture of the CRUSP features a free ground floor intended for resident interaction - Figures 4 and 5. The arrangement of the blades on pilotis aims not only at aesthetic aspects but also provides physical and visual permeability for pedestrians, creates living areas, and isolates resident access.[8]

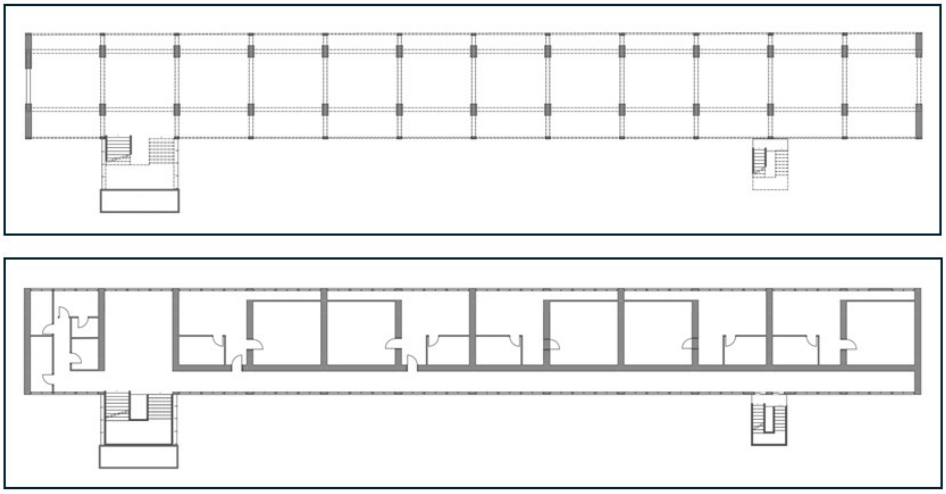

Figure 4. Ground floor and standard floor plans of one of the CRUSP buildings by the authors

Figure 5. Rear elevation of one of the CRUSP buildings by the authors

CRUSP's architectural design prioritizes communal living and urban integration. The free ground floor, a hallmark of modernist ideals, fosters social interaction among residents by creating open and inviting spaces for gatherings and leisure activities. The strategic placement of the buildings on pilotis enhances the flow of pedestrian movement, allowing for unobstructed physical and visual connections across the site. This approach not only enriches the sense of community but also harmonizes the built environment with its surroundings. Furthermore, the thoughtful isolation of residential access ensures privacy and security for inhabitants while maintaining the openness of shared areas, striking a balance between functionality and social engagement.

The generous span between the blades, about eighty meters long, favours excellent ventilation, natural lighting, and views to the outside, with the dormitories oriented to the north. Each blade was designed to house sixty units of approximately 40 square meters each. Each typical floor accommodates ten units, in addition to a living space, an infirmary, a pantry, and a laundry room. Each unit includes a study room, a bathroom, and a bedroom for up to three people. A restaurant for the entire complex, with 720 units capable of accommodating up to 2,160 students, was also designed.[9]

The eighty-meter span between the blades not only enhances environmental comfort but also underscores the project's commitment to sustainable design principles. The strategic orientation of the dormitories to the north maximizes exposure to natural light while minimizing direct sunlight, promoting energy efficiency and a pleasant indoor atmosphere. Each blade, designed to house sixty well-planned units of approximately 40 square meters, reflects a focus on optimizing space for functionality and comfort. The inclusion of shared amenities such as living spaces, infirmaries, pantries, and laundry rooms on each floor fosters a sense of community among residents. Meanwhile,

the design of a central restaurant capable of accommodating up to 2,160 students emphasizes the project's scalability and consideration of the diverse needs of its large resident population. This approach ensures not only practical living arrangements but also a dynamic and interconnected student environment.

CONSTRUCTION AND OBSTACLES

The construction system initially provided for on-site assembly of most components, such as the façade frames and the vertical block cladding. The first six blocks were erected with cast-in-place reinforced concrete structures, while the other cladding components were prefabricated on-site - Figure 6.

Figure 6. Front and rear façades of one of the CRUSP blocks by the authors

It is relevant to mention that São Paulo hosted the IV Pan American Games in 1963, which motivated the state government to finance the construction of the first blocks. Initially intended for athlete accommodation, these blocks were later allocated to University of São Paulo (USP) students. The construction of blocks A, B, C, D, E, and F, along with the restaurant, began in March 1962. Although the CRUSP was not fully completed, it served as a student residence from August 1963 to December 1968 - Figure 7.

Figure 7. Relationship between the blocks and the CRUSP marquee by the authors

Each block was equipped with prefabricated stairs - Figure 8 - and two lifts that stopped at intermediate landings, a solution adopted due to the high costs of additional stops at the time in Brazil, being common in modernist buildings of the 1960s.[10] This approach was gradually abandoned in the 1970s as elevator manufacturers increased, and installation costs decreased.

Figure 8. Prefabricated stairs used in the CRUSP by the authors

Initially, the architects proposed a fully prefabricated structure due to its capacity for repetition. However, due to the need to undergo a public bidding process, the commission responsible for the work at USP opted for conventional structures, given their greater familiarity with this system. Full

prefabrication would have required imported equipment, which was not feasible at the time. Despite this, the construction was completed in record time, using light prefabricated components for the envelopes and other fully industrialized components.[11]

Sidney de Oliveira (2019) highlights his experience in designing the University of São Paulo Residential Complex (CRUSP) as a remarkable and innovative challenge in Brazilian architecture. The project faced several technological and logistical difficulties, especially due to the lack of infrastructure and information about prefabrication in Brazil at the time. The need to adapt the project to use prefabricated components required a creative and pioneering approach.

The public competition had an addendum that obliged the construction company to adopt the prefabricated method, a challenge that was met with determination by the team involved. Sidney de Oliveira emphasizes the importance of the University of São Paulo (USP) as a leader in this innovative process, seizing the opportunity to demonstrate the institution's technical and innovative capabilities. During construction, significant challenges were faced, such as the lack of adequate cranes, which was resolved using train tracks and wheels to ensure safety and stability in the assembly of the structures.

After the Pan American Games, the political context changed with the Revolution of 1964, impacting the project. A new rector of USP attempted to dismantle part of the main building to facilitate his access, highlighting the flexibility of the prefabricated system, which allowed for the relocation of structures without significant loss. The technical characteristics of the prefabricated components, such as pre-installed systems in the pieces and metal forms, facilitated the assembly process and reduced potential execution problems. The use of materials like coloured Formica from Formiplac for facades represented an aesthetic and practical innovation, offering durability and contemporary aesthetics to the complex.[12]

The CRUSP project exemplifies not only a milestone in Brazilian architecture but also a demonstration of how technical challenges and political contexts can shape creative and lasting solutions.

DISTORTIONS IN THE DESIGNAND BUILDING

The 1960s profoundly marked Brazil's public and economic policies. The coup of 1964, initiated on March 31, aimed to depose the government of President João Goulart. This event resulted in significant changes in the country's political organization, as well as in economic and social life.

From the first days after the coup, violent repression targeted sectors with leftist political characteristics, such as the National Union of Students (UNE), the Peasant Leagues, and Catholic groups like the Catholic University Youth (JUC), in addition to other popular actions.[13] This repression had a notable impact on society, disrupting movements and organizations that fought for social and political change.

The construction of the remaining blocks (G, H, I, J, K, and L) was interrupted for years due to political changes in Brazil starting in 1964. In 1968, the Army expelled students from the blocks that were ready, and the buildings were repurposed for other functions, with some structures being demolished. For example, the unfinished concrete precast structure of block J was demolished to open a loop road, separating the structures of blocks K and L from the rest of the complex.[14]

Despite there being no residents in CRUSP since 1968, USP expanded its capacity to meet the high demand for public education. In 1972, the CRUSP buildings were repurposed for other uses, such as the rectorate, Campus City Hall, and some other courses. In the 1970s, after some renovations, part of Block A returned to being housing, now for foreign postgraduate scholars.

In late 1979 and early 1980, students invaded and occupied several floors of blocks A and F, and years later, other blocks were also occupied. In the 1980s, under student management and without

maintenance resources, the buildings deteriorated, leading to the demolition of the prefabricated structures of the blocks in 1983.[15]

In the past 30 years, the CRUSP buildings have undergone numerous renovations that have altered their original appearance, with none being a complete restoration - Figures 9 and 10. This research does not cover buildings that were designed and constructed after the original project.

Figure 9. Alterations in the CRUSP facade by the authors

Figure 10. Inadequate maintenance of the common areas of CRUSP by the authors

The maintenance and proper restoration of CRUSP are relevant since this construction represents a significant landmark in Brazilian architecture and documents the innovative use of reinforced concrete prefabricated structures. The preservation of these high-quality architectural references is

fundamental to understanding the transformations in the construction industry and their impact on contemporary production.

CONCLUSION

The University of São Paulo Residential Complex (CRUSP) is not only a landmark in the formation of the University City's Campus of USP but also a significant exemplar of Brazilian Modern Architecture, standing out both for its innovative design and pioneering experiences with industrialized construction systems. Despite successive renovations that, unfortunately, did not adequately recognize its architectural importance, there are still various aspects that can be preserved and recovered.

Documenting the architect's original intentions, especially through direct contact with one of the creators, Architect Sidney de Oliveira, who led the original construction, along with field surveys and project redesigns, is essential for a deep understanding of this study.

The results of this analysis emphasize the importance of documenting and studying the construction methods employed at CRUSP, as they represent a crucial phase in the development of construction technologies in Brazil. Despite the political and economic difficulties faced over the years, CRUSP continues to be a valuable example of architectural and technical innovation.

These results not only contribute to the preservation and dissemination of modern architecture projects and their prefabrication systems but also highlight the challenges faced in Brazil. This information is relevant to guide future prefabrication initiatives, encouraging the adoption of innovative technologies in housing construction.

The experience accumulated with CRUSP demonstrates that prefabrication does not necessarily imply a loss of aesthetic or functional quality. On the contrary, when well planned and executed, it can offer efficient and lasting solutions, capable of meeting contemporary demands in an innovative way.

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LABOR IN THE AGE OF AI

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INTRODUCTION

Emerging technologies often spark worries about job displacement and the broader implications for various industries. For instance, CAD systems once seemed to signal the demise of traditional architectural drawings, just as robots were predicted to eliminate manual labor. However, the actual impact has been more nuanced than initially anticipated. In a 1965 article titled "Will the Computer Change the Practice of Architecture?" published in the Architectural Record, Jonathan Barnett recounted key discussions from a conference held by the Boston Architectural Center on the role of computers in architecture. A pressing question at the time was whether computers, as new collaborators, would eventually surpass the human intellect that created them. Could they serve as tools to enhance an architect's capacity to produce meaningful designs, rather than being perceived as soulless machines that might inhibit creativity?[1]

Today, the rapid evolution of generative AI across various fields raises similar questions about the immediate future of work and the role of human creativity[2] in a world increasingly influenced by machines.[3] In response to these techno-social concerns, a graduate seminar researched labor by examining it from historical and ethnographic perspectives. The seminar utilized generative AI to imagine future scenarios, drawing on present and past knowledge to inform innovative perspectives on the evolving nature of work. By employing design fiction as a methodology for storytelling, the seminar aimed to explore new trajectories of work that might arise from the integration of generative AI into various fields. Although the concept of AI has been around for decades, recent advancements have aligned to bring AI diffusion models into widespread use, particularly in design. Since 2022, AI-powered image-generation tools have become popular among designers due to their affordability and ease of use. This accessibility has democratized design, making it more inclusive and widely available. At the same time, it has highlighted the growing need for professional visual literacy[4] to effectively navigate and utilize these new tools. With the help of AI, the seminar was able to visualize alternative pasts, presents, and futures of craftsmanship, exploring how technology might reshape traditional practices and roles.

METHODOLOGY

Labor in the Age of AI is an introductory design computation course that exposes students to digital design and AI image generation. The course follows a design and research framework that integrates concept and practice, viewing them as interconnected rather than separate. This interdisciplinary seminar engaged both undergraduate and graduate students majoring in architecture, interior design,

and graphic design at Lawrence Technological University's College of Architecture and Design. Not limited to software training, the course emphasized contemporary digital design, utilizing software as a tool to visualize and explore spaces of work as sites for design. While discussions about AI often highlighted job loss and the pressures on certain types of labor, this course aimed to investigate broader aspects of labor - the efforts required to transform designed artifacts and environments into physical realities. By borrowing methodologies from ethnography, archaeology, and anthropology, the course encouraged students to study, represent, and create design fictions that explored the future of labor and the implications of displaced or disrupted work. *Labor in the Age of AI* is structured around four assignments - *Imagine with Midjourney, Storytelling, Blending Craft, and Reimagining Labor* - each adding a complementary layer to the discussion, as outlined below.

Imagine with Midjourney

The first assignment combined skill-building, AI image generation, and research on the topic of labor. During this initial phase, students chose a craft to explore throughout the semester, gathering relevant information and archival images from open-access databases and digital repositories.

The teaching approach emphasized the importance of digital archives as visual resources for inspiring image creation and assembling a personal archive of images to treat as precedents (Figure 1). These images were used to substantiate the AI image generation with situated cultural contexts. This visual exploration was paired with a literature review to provide a broad understanding of the lineage of various workspaces. Through this process, students gained a comprehensive understanding of the evolution of specific tools, production systems, work environments, and manufacturing processes.

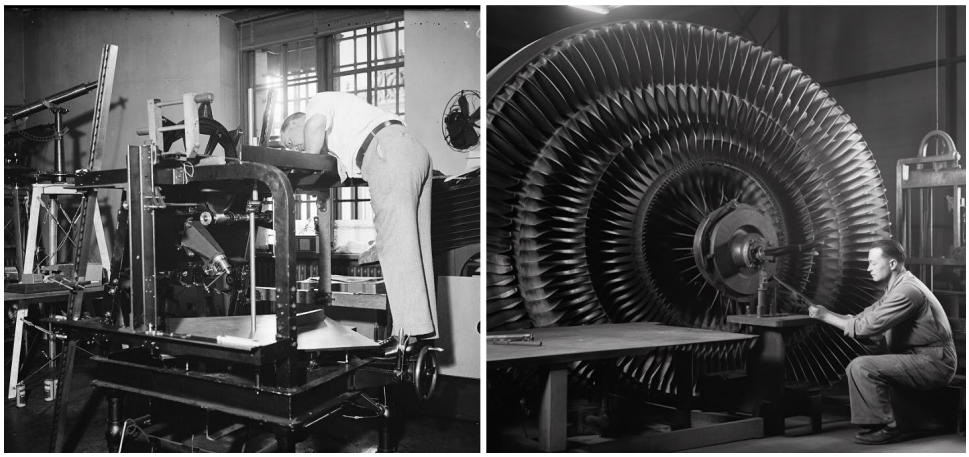

Figure 1. Left: Printing Camera, 1936. Source: Library of Congress Prints and Photographs Division Washington, DC. Right: AI-generated image. Student work by Noah Chan.

Students then used these source materials to drive Midjourney and leverage its creative potential. Midjourney was the preferred platform for experimenting with text-to-image, image-to-image, and image-to-text generation, allowing students to test the platform's limits and possibilities for creative exploration. The *Imagine with Midjourney* assignment helped them develop skills in performing the base functions of the program, facilitating the advancement and iteration of design thinking. To ensure a clear understanding of the image generation process, students were asked to create a process map that outlined the various phases and the curation of the final outcomes (Figure 2). They graphically mapped out these functions to demonstrate how they achieved each result.

Unlike many conventional software programs used in design, Midjourney did not require advanced expertise to produce credible and high-quality outcomes. However, developing a certain level of skill

was necessary to understand the logic behind creation, iteration, and curation processes. While the low barrier to entry could democratize design, it also reveals the growing need for professional visual and aesthetic literacy.[5]

Through their engagement with AI image generation, students explored new intersections between technologies, advanced materials, innovative tools, and the agency of human craft. The focus was on the culture of work within a broader ecosystem that included craftsmanship, societal narratives, and modes of production.

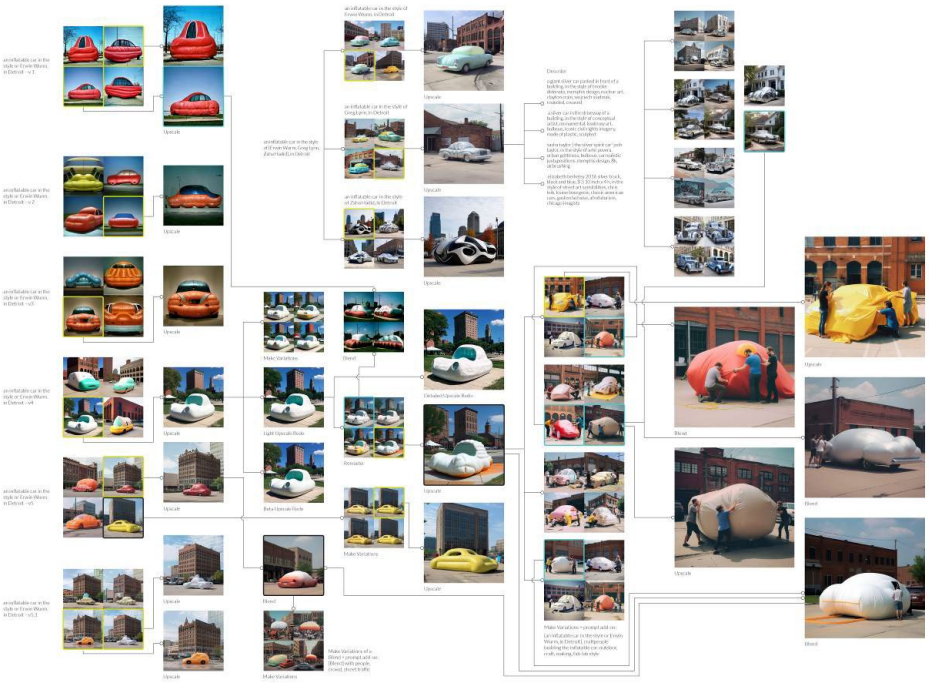

Figure 2. Process diagram of AI image generation. Work by the authors.

Storytelling/Storyboard

The following exercise was designed to establish productive connections between disciplines. In this iteration, the course drew on cinematography as a reference to help students develop stories about a chosen craft or labor, supported by generative AI and large language model platforms like Gemini or ChatGPT.

Storytelling is a fundamental human activity; it teaches, shares, motivates, incites, unites, and emotionally moves us. Stories are found everywhere - in personal interactions, advertising, writing, games, and movies. Films, in particular, represent the pinnacle of modern storytelling, influencing visual and cultural trends.

As students progressed in their visual literacy and narrative skills, the class focused on storytelling techniques using movie-inspired storyboards. For this exercise, students were asked to create a narrative based on their labor research topic. They began by analyzing the opening scene of an iconic film and then developed a 10-frame storyboard to convey their own story (Figure 3). This task encouraged them to go beyond the knowledge of a specific labor, prompting them to construct characters, establish connections, and build a cinematic sequence that captured atmosphere, emotions, and timing within a coherent narrative framework. Their exploration focused on understanding the storytelling elements that immerse viewers in a narrative and evoke specific emotions through

techniques like color use, camera movements, and cinematography. To address these questions, students collaborated with AI text generators to craft narratives using the six storytelling questions outlined by screenwriter Glenn Gers.

The exercise of mapping a visual precedent and reconstructing the same storyline using AI also emphasized prompt crafting, guiding students on how to use cinematic terminology - such as footage style, field depth, camera lenses, and filming techniques - to effectively control image generation with intentionality and authorship.

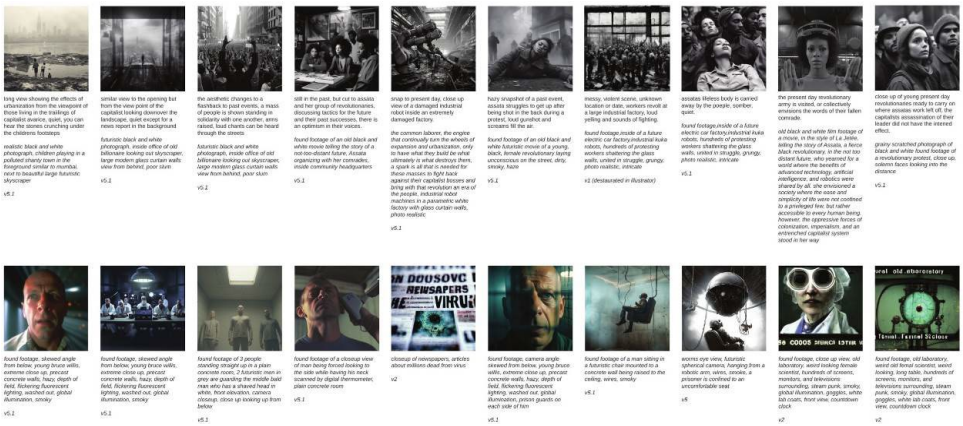

Figure 3. AI-generated storyboard based on the opening scene of "12 Monkeys". Student work by Jaret Rice.

Blending Craft

In the *Blending Craft* exercise, the course used AI as a motivation to encourage students to engage with the world beyond the classroom. They were instructed to plan a site visit to a space of labor and act as ethnographers by gathering evidence about a labor or craft in their vicinity. This could relate to their labor research topic or be another of their choosing, such as a family business.

Students were tasked with photographing tools, details, clothing, machinery, and technological devices, analyzing the space as a work environment. This hands-on experience provided an opportunity for them to engage in meaningful conversations with craftspeople or key individuals involved in the workspace. To construct compelling storytelling with AI-generated images, students were guided to ask questions about everyday practices, such as which tools are commonly used, what clothing or uniforms are worn, future prospects for the craft, the most challenging aspects of the work, pathways to becoming an expert, the potential for technology to enhance processes, long-term physiological impacts of physical labor, and how the craft might evolve over the next fifty years. These observations and interviews served as field notes, allowing students to establish their perspective on the topic (Figure 4). Simultaneously, witnessing human interaction with materials and machines enriched the AI-generated narratives.

Diffusion models and text-to-image AI tools transcend cultural boundaries, as they are not confined to any specific culture. They exist in a world that is perpetually in the making, constantly evolving and adapting to new socio-technical advancements. In this context, ethnographic observations can be a pedagogical tool, allowing the study of human behavior within a given culture. Through ethnography, students gained insights into the fabric of society, examining how practices and knowledge are organically configured. Students traced the development of a craft and recognized distinctive elements that initiated the creation of speculative images, fostering iterative and critical thinking. Through this process, they mined the past to construct a more thoughtful future.

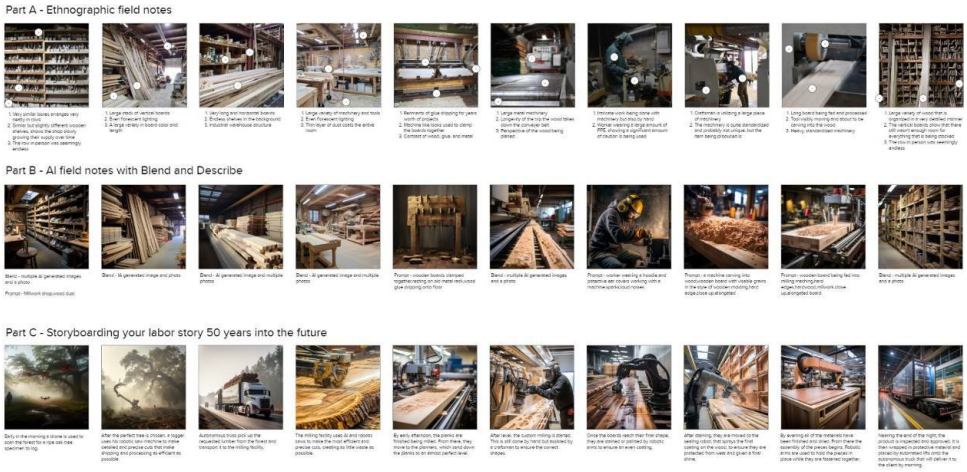

Figure 4. Field notes used to generate AI storytelling. Student work by Michael Zonca.

Reimagining Labor

For the final assignment, students were required to create a story about their labor research topic using Midjourney and ChatGPT, producing a minimum of 30 images. This exercise challenged them to think critically about visual storytelling and plot structure, building on the knowledge and skills developed in earlier assignments.

The *Reimagining Labor* assignment was based on the belief that there is a crisis of imagination, evident in the tendency to oscillate between superficial design, superfluous products, and derivative ideas. To address this, the assignment leveraged the concept of *design fiction*, which Julian Bleecker defines as "the practice of creating tangible and evocative prototypes from possible near futures to help discover and represent the consequences of decision-making." This approach served as a powerful tool for resisting unimaginative thinking, encouraging students to push the boundaries of creativity and "imagine harder."

In this final assignment, students were invited to use their growing design fiction skills to merge research, storytelling, design, world-building, and scenario creation. They explored alternative pasts, presents, and futures that could potentially emerge from our current timeline. Drawing on previous assignments that examined their chosen craft through the lenses of cinematography, ethnography, and AI text-to-image generation, students were tasked with understanding the multi-scalar ramifications of envisioning alternative realities and how these visions might influence our understanding of labor.

By combining AI-generated visual representations with fictional narratives, students presented fresh perspectives on how labor is currently portrayed and how it might evolve within our embodied culture. They were encouraged to think of elements like tools, work equipment, furniture, clothing, and other relevant items as props in a movie, each playing a narrative role in illustrating where labor, craft, society, and technology might be headed.

RESULTS

On generative AI for enhancing creativity

The selected labor types ranged from woodworking machinery (Figure 5) and construction masonry to submarine construction, pottery, metalsmithing, bricklaying, mail delivery, printing press operation, and mining. Some successful projects embraced design fiction to imagine dystopian futures, such as scenarios where machines fabricate humans (Figure 6) or technology-enabled working classes find ways to overturn capitalist work structures (Figure 7). One successful outcome beyond the scope of

the course resulted in one of the students enrolling in pottery courses after her interviews in a local pottery studio.

The use of AI in this type of research allowed students to cross-reference semantic areas and rapidly iterate on the possibilities[6] for altering the imagery associated with different forms of labor. This process highlighted the effectiveness of approaching the creative process as curators rather than generators, guided by various algorithmic interpretations of input prompts.

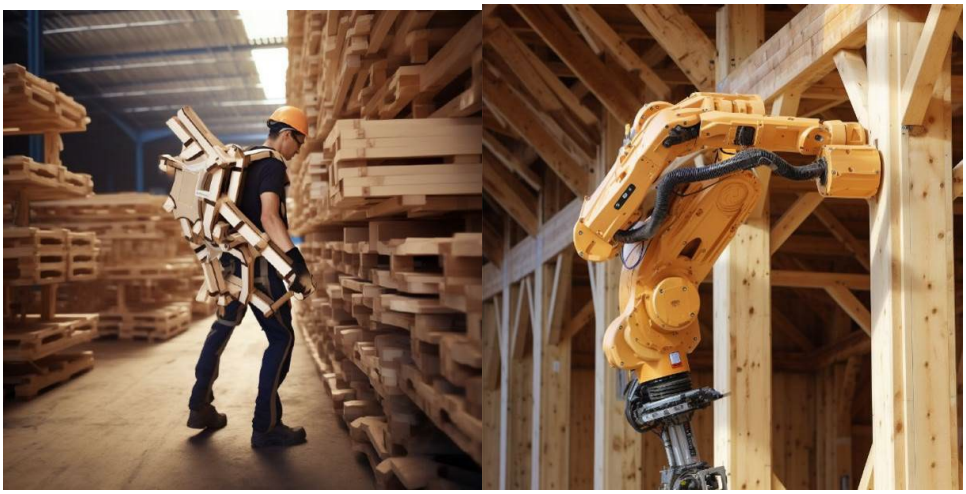

Figure 5. Tech-skeleton and robotic arm specialized in woodworking. Student work by Michael Zonca.

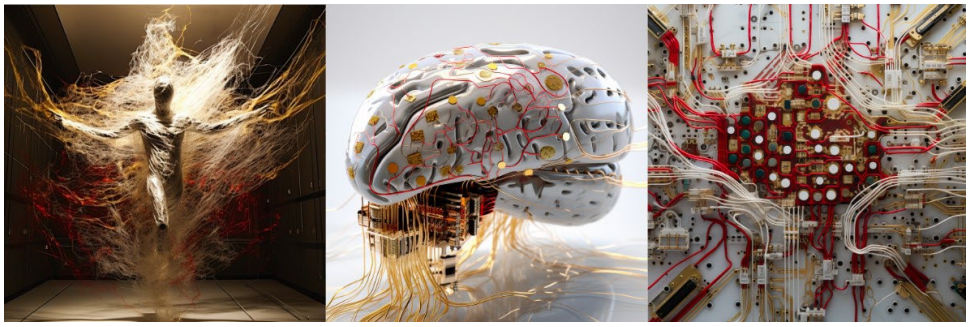

Figure 6. Process of creating a human. Student work by Nick Barrett.

Figure 7. Dystopian tools to overturn capitalism. Student work by Jaret Rice.

On visual narration

Just as a prompt must be crafted with a particular hierarchy of information, a story represents the narrative, while a plot is the sequence of events that construct the story. Working within the constraints of a storyboard to narrate a story enables consideration in geometric terms, finding symmetries or techniques that reflect the perspectives of the characters involved.

On observation

A visit to a car repair shop can reveal endless possibilities for new visuals inspired by the tools and their formal qualities (Figure 8). Similarly, studying a plaster craftsperson can lead to the development of new drawing types or notations that foster new expertise in the field (Figure 9). This exercise stimulates imagination and enhances the ability to observe everyday life, transforming these observations into valuable tools for design.

On imagination

Like design, imagination can be cultivated with the right inputs, and AI image generation hinges on continuously defining and releasing constraints to shape narratives. For example, in one student project, the “craft of looming darkness” served as a springboard for a story in which producing colors was a subversive act in a darkness-dominated world; in another, a microscopic entity—like a spore—became the seed for planning entirely new worlds. Thinking about labor provided an opportunity to engage in a loop of imagination, consistently using the human body and culture as a reference point while branching out with the help of technology.

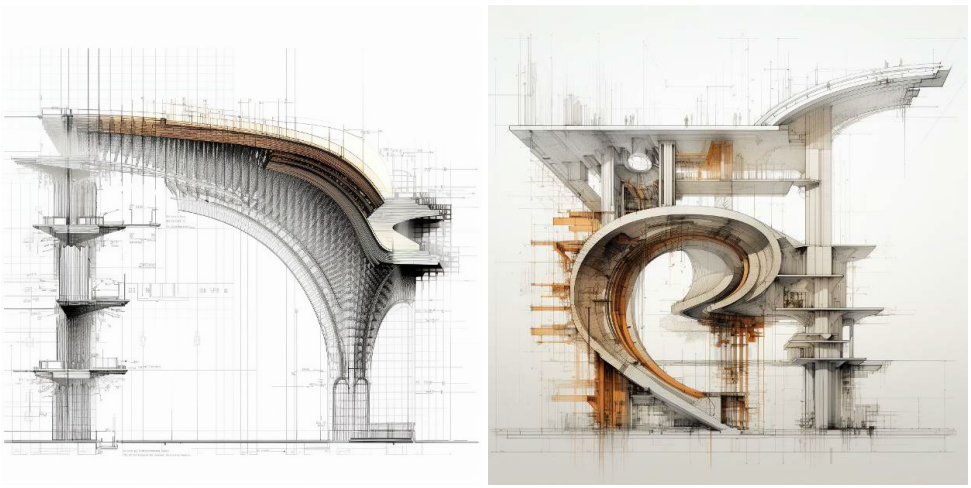

Figure 8. Architectural notations. Student work by John Lucente.

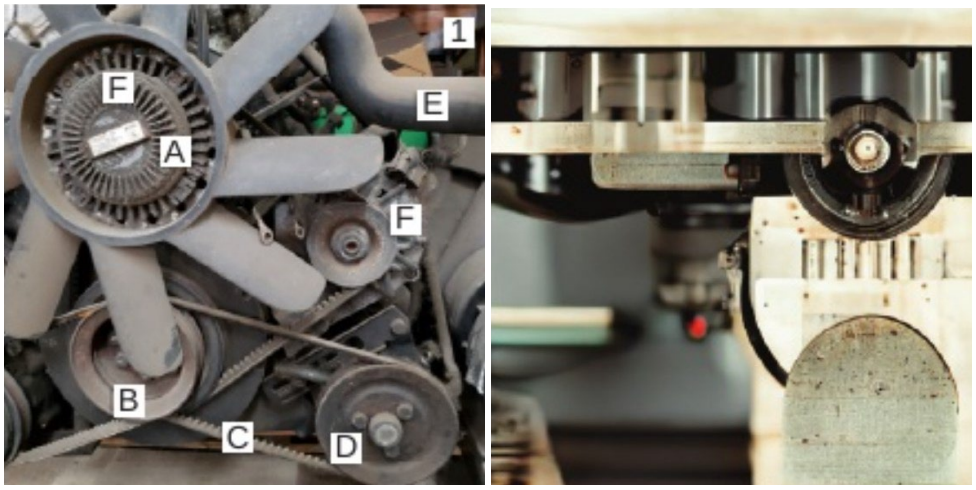

Figure 9. Left: photo documentation of a car repair shop. Right: AI generated image. Student work by Jaret Rice.

CONCLUSIONS

AI technology, much like past technological advancements, presents a set of contradictions and opportunities for rethinking labor and design. Historically, the debate around ornamentation, as seen in Adolf Loos's 1913 essay "Ornament and Crime," highlighted the tension between aesthetics and labor efficiency.[7] Loos argued for the removal of ornamentation from objects to prevent the waste of human labor and resources. This raises a critical question: did this shift truly benefit the laborer, or did it simply transform the nature of their work? Today, AI and digital fabrication offer a new lens through which to explore these questions. The advent of collaborative AI and robotics, or "cobots," promises to revolutionize what is possible in terms of labor, cost, and material efficiency. In this context, the role of the worker and the nature of their tasks are poised to evolve significantly. We may even see a return of ornamentation, this time created by AI without the moral and economic pressures traditionally placed on human laborers.[8]

The course *Labor in the Age of AI* explored these evolving dynamics through the method of historical ethnography, allowing students to delve into the crafts and labor practices of the past and reimagine them in future scenarios. Drawing on the ideas of architectural historian Manfredo Tafuri and sociologist Pierre Bourdieu, the course emphasized the importance of firsthand experience[9] and the concept of habitus - societal forces ingrained in individuals' bodies and behaviors.[10] By examining traditional craftsmanship and integrating these insights with AI tools, students created speculative narratives that bridged cultural pasts and futures, defining labor as a series of performances executed by different entities depending on the context.[11]

This experimental course placed a renewed focus on visual literacy and the importance of precedent in design. It leveraged AI to move beyond conventional geometric and formal considerations, encouraging students to explore qualitative and atmospheric qualities in design through storytelling, design fiction, and world-building. By using open-access visual archives, students could integrate historical imagery into new AI-generated contexts, enhancing their ability to observe, analyze, and innovate.

Moreover, the use of platforms like Discord and AI tools such as ChatGPT allowed students to refine their research and narrative skills. The course encouraged them to develop compelling stories about characters and plots set within designed spaces, using designed tools, and evoking carefully considered atmospheres. This emphasis on storytelling aligns with the understanding that, as

designers, we are not just creators of objects but also storytellers. By training students to ask better questions and develop more nuanced narratives, the course underscored the transformative potential of AI in design and the importance of maintaining a critical and imaginative approach to technology's role in our future.

In conclusion, the integration of AI in design education, as explored in this course, highlights the evolving nature of work and creativity in an increasingly digital world. By blending historical insights with advanced technology, the course offered a platform for students to engage deeply with the past, present, and future of labor, fostering a thoughtful exploration of how we might navigate the complex relationship between human creativity and machine capabilities in the years to come.

NOTES

[1] Jonathan Barnett, "Will the Computer Change the Practice of Architecture?." *Ekistics* 19, no. 113 (1965): 247-249.
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A PROPOSAL TO REVIVE THE BREWSTER WHEELER RECREATION CENTER: AN ARCHITECTURAL APPROACH

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INTRODUCTION

This research dives into the history and potential revitalization of the Brewster Wheeler Recreation Center in downtown Detroit, emphasizing the city's growth and the preservation of its heritage. The proposal features a pitched roof design that preserves the building's historical character while incorporating modern elements, creating a harmonious blend of the two. Additionally, the proposal utilizes the surrounding land to transform the recreation center into a central community hub, with sports fields and an internal museum. The museum would showcase the building's history and highlight notable figures, from its beginnings as a library in 1917 to its current form.

The Architectural and Historical Evolution of the Brewster Wheeler Recreation Center

Poverty, slums, and crime are outdated perceptions of Detroit, as the city is undergoing significant renovation and development, especially post-pandemic. One such iconic building, the Brewster Wheeler Recreation Center, known for its cultural and historical importance, has been frequently mentioned for renovation,[1] though work has yet to begin. Important architectural and cultural factors should be taken into consideration based on its history when renovating this building.

The Ginsberg Library: A Start[2]

Its history starts with the construction of the Bernard Ginsberg Library.[3] The library is a single-story structure with a brick veneer, initially built in 1917 and situated on a raised concrete foundation. Its rectangular shape features a roof that was originally covered with green Ludowici tile but has since been replaced with asphalt shingles. The front facade has five bays, with the five at the rear being two bays deep. The main entrance is highlighted by stone pilasters and an arched stone elliptical hood with a denticulate cornice. A stone porch supported by two pillars extends from the facade. A secondary entrance is located at the back, and an exterior chimney used to stand on the northwest corner but no longer exists. A stone water table separates the basement from the first floor. Windows were originally one-over-one sashes, with an arched fanlight above and smaller sashes on the sides. The narrow side windows had four-over-four sashes, all framed with decorative brick and stone arches. Now, however, the windows are all blocked off, and the original skylight on the roof is enclosed.

The Brewster Wheeler Recreation Center: A Change

In 1927, attendance at the library plummeted because the area around the neighborhood was transitioning from residential to industrial, but the area adjacent to the library remained residential. This project was then handed over to the Recreation Department because they realized that the community lacked any real recreation center. The Brewster Wheeler Recreation Center was opened in 1929 in the City of Detroit as the Central Community Center.[4] The building was an addition connected and placed right next to the library. The 1929 two-story brick veneer building, in an Art Deco and Jacobethan style, features stone details and sits on a raised stone foundation. It's asymmetrical and has ten-bay-wide front and rear elevations. The front entrance, adorned with stone carvings, is off-center, while larger window openings are on the higher northeast side. Many original windows have been removed or boarded up, with larger ones having divided lights and steel frames. The building has a significant presence on its site with no landscaping. The recreation center included lots of recreational activities such as a pool, gymnasium, and clubhouse rooms and offered tap dancing, boxing, swimming, and drama classes.[5] Also, the interior of the library was converted into an auditorium for music. On Thanksgiving Day, 1932, the Harlem Globetrotters basketball team played their first tour game at the center against the "Detroit AA" — a team assembled by Leon Wheeler, the man who ran the recreation center.

Brewster-Douglass Housing Projects: Rise and Fall

On the site near the recreation center there was a 14-acre lot of slums, called the 'Black Bottom'. In the 1930s, the slum housing was demolished to make way for the Brewster-Douglass Housing project: the first federally funded housing projects for African-American residents. Due to these projects, The Central Community Center was renamed the Brewster Community Center, and in 1969, the building was renamed for the final time to the Brewster Wheeler Recreation Center in honor of Leon Wheeler. In 1935, first Lady Eleanor Roosevelt attended the ceremony for Brewster Homes.[6] Situated in proximity to Brush Park — an urban neighborhood that was primarily residential at the time — the Brewster Projects would open with 701 units in 1938, and by the end of 1941, there were 941 units. In 1942, two six-story apartment buildings were built and in 1951, there were row houses and six 14-story towers that were home to over 10,000 residents at their peak.[7] However, in the neighborhood during the 1960s and 1970s, there was an abundance of drugs and crime causing people to leave these homes. The Detroit riot of 1967[8] took place during this time and showed the racial tensions that had been brewing for years. There was widespread destruction of property of residences, stores, and commercial buildings leading to a strain on resources in general. The riot intensified racial tensions and divisions within the city leading to a loss of trust in Detroit's capability to ensure the safety and stability of its denizens. This resulted in a significant migration of residents from Detroit to the surrounding suburbs. In the 1960s, public institutions struggled to provide funds for public buildings during this time due to the decline in population.[9]

In a last attempt to stop the decline of the Brewster Homes,[10] the original low-rise Brewster Homes were replaced by 250 townhouses in 1991. However, these efforts were futile. The Brewster Homes, like two of the high-rise homes, were starting to be demolished in the early 2000s and were half-empty in the mid-2000s. In 2013, Mayor Dave Bing initiated a comprehensive plan to demolish 10,000 vacant homes and businesses to improve community safety in the area, focusing on the demolition of the Brewster Homes.[11] Then they were demolished in 2014.

The Brewster Homes were home to many influential figures, underscoring their positive cultural significance. Mary Wilson of the Supremes described her childhood experience moving into the projects as "like moving into a wonderland." The Brewster Homes nurtured many individuals who would later make major contributions to African American culture. Notable residents include Wilson,

along with Diana Ross and Florence Ballard, who formed the Supremes there. Other famous figures include Little Stevie Wonder, Smokey Robinson, actress Lily Tomlin, boxer Joe Louis12, comedian Loni Love, and singer Etterlene DeBarge.

INSIGHTS AND ANALYSIS OF THE BREWSTER WHEELER RECREATION CENTER

One crucial insight from the history of the Brewster Wheeler Recreation Center is the importance of adaptability in community spaces.[13] Initially designed as a library, the building was later repurposed to meet the changing requirements of the neighborhood. With the surrounding area shifting from residential to industrial, the decision to transform it into a recreation center became essential, fulfilling the community's demand for leisure and recreational activities. This adaptability enabled the building to remain relevant over the years, delivering a varied range of recreational programs for the residents.

The former Brewster Wheeler Recreation Center was deeply connected to its surrounding community, especially the Brewster/Douglass Homes. The residents of these homes were the primary users of the center, and as the housing project flourished, the center became a vital hub for recreation, strengthening the sense of community. However, as the housing project declined and residents moved away, the center's attendance and funding dwindled. This underscores the need for community support and sustainable urban planning that balances environmental, social, and economic needs for long-term well-being.

Surrounding the building for the former Brewster Wheeler Recreation Center, there is a diverse array of significant landmarks and institutions, including the Brewster Homes, the Ford Field (a football stadium), Comerica Park (a baseball stadium), Children's Hospital of Michigan, the Lexus Velodrome (an indoor 1/10th mile cycling track), Great Shiloh Baptist Church, Little Caesars Arena (a hockey rink), as well as educational institutions such as the Mike Ilitch School of Business and Cass Technical High School. The Brewster Wheeler Recreation Center primarily used to serve as a hub for sports enthusiasts, offering them the chance to engage in athletic activities and connect with like-minded individuals. Similarly, the presence of neighboring sports facilities in the vicinity fostered a community geared towards those who share a passion for sports.

The former recreation center is strategically situated near highway I-75 and Downtown Detroit, which currently stands as the most developed area in the city. Downtown Detroit has had extensive renovation efforts, and major sports stadiums and landmarks add to its appeal. The cluster of sports-related facilities and educational institutions in close proximity to the recreation center seems to suggest that it should remain a recreation center in the future since the purpose of this function aligns very appropriately with that cluster.

RENOVATION PROPOSAL: PRESERVING LEGACY

Structural Elements: Roof Design and Window Features

Firstly, I would consider replacing the existing roof structure with a continuous, unitary roof consisting of two parts: a flat portion over the west volume and a pitched segment that slopes up towards the east facade over the remaining two volumes toward the east. The west volume started out as a library and then became an auditorium. Relative to the function of housing sports-related activities, the historical significance of the library drastically differs from that of the other two volumes. The latter focused on athletics, which explains the various roof segments. The newly proposed roof would create a sense that the three volumes have become one single building. Secondly, the higher east facade would feature high glass windows. This orientation allows for the introduction of the qualities of the morning sun into the interior. The rising sun provides a joyful atmosphere and ensures that the abundant natural light enhances the building's ambiance. On the other

hand, positioning windows on the west side, where the sun sets, can result in overpowering brightness, limiting visibility indoors and potentially diminishing the overall comfort.

Exterior Space

In terms of outdoor spaces, there is a large amount of land around the building, with the land in front of the south facade having dimensions of 460 ft x 190 ft and the land further south and across the street having dimensions of 550 ft x 460 ft. The former lot can be used for a soccer field and the latter can be used for a baseball field. The south side of the building has a much more welcoming and beautiful touch to it than the north side of the building. The north side has “nothing”, so a patio by this side and a playground by the library directly facing the patio would be a nice addition. The parking lot that connects to the adjacent road is notably compact, so introducing an additional parking lot on the opposite side would provide the option for those entering to turn either left or right for parking.

Signage

The northeast side of the Brewster Wheeler Recreation Center faces Highway I-75 and features the name and logo of the Detroit Recreation Department. To improve visibility amidst heavy traffic, the font can be changed to an Art Deco style, with emphasized letters to complement the building's aesthetic. A white line runs along the upper part of the building but stops at the northeast side. Extending this line would enhance the design. Additionally, the main entrance on the east side lacks the logo, so it's recommended to add a larger version with popped-out letters. A 30-foot pylon sign with the "BWRC" acronym should be placed on the southeast corner of the property, preserving the connection to the building's original name while reflecting its renovation.

Asymmetry of the Three Volumes

There are three volumes to the building: the central volume is the principal body, then there are two wings, one on either side: a library and a larger volume. The latter, which is taller, protects the rest of the building from the noises of the highway through its size. Each of the three volumes has its own window shape, with the library having arches, the central volume having squares, and the largest volume having rectangles. Given this volumetric composition, the building looks asymmetrical when perceived from either the north or the south side.

The entrance to the library looks like the main entrance even though it isn’t because it is the most decorated. It includes columns, an arch, and a portico and looks like the only welcoming entrance, meaning that people would probably go through it more often than the central and right entrances. This may lead to confusion and false expectations because the library is an auditorium, not a recreation center, yet the word “Recreation Center” is clearly seen in the name “Brewster Wheeler Recreation Center”. Therefore, the ornamentation of the library’s entrance should be toned down and at the same time, the central entrance should be decorated more than the toned-down library entrance and built off of its casing, as it has a beautiful, unique pattern. The right entrance, on the other hand, needs to be equivalent to the newly proposed library entrance in terms of lavishness and eye-catching design. At any rate, the entrances should still look like they are part of the building so that they don’t compete with the rest of the facade. The roof of the building goes from a tall to a slightly shorter height, giving rise to the above-mentioned asymmetry, which might compromise the reading of the main entrance to the central volume as the main entrance.

Consistency Across the Three Volumes

The library and the 1929 extension feature clear stylistic divergences due to differences in terms of roof style and size, among other things. While the more conventional approach would have the history of the building take priority over the volumetric composition, my proposition is to do the exact opposite. The library should be demolished so that it can be integrated with the rest of the volumes into one coherent whole to give the feel that the new recreation center is one building rather than split pieces of additions. The front and back facades along with the entrance would be demolished and new facades and a new entrance would be created that would line up with the existing front and back facades of the 1929 extension. This way, the front and back facades can be flush with the other volumes and the central entrance can match the entrance closest to the highway. The building should strike a balance between historical aspects and modernization, avoiding an overly one-sided design that completely preserves every detail of the historical facade.

Historical Heritage and Modernization

To avoid kitsch architecture and keep a sense of unity throughout the building, the library would include a simplification of the Art Deco style of the other two volumes. Finding this middle ground is essential as it would ensure that, while we respect its historical heritage, contemporary elements are incorporated to meet modern needs and aesthetics. This approach preserves the external appearance and historical charm while allowing the building's interior to serve modern purposes efficiently. Also, the windows are arched in the library while the rest of the center has rectangular windows. To fix these asymmetries, the whole building should look like just one building by having the same type of windows throughout, such as arches or rectangular windows, and an overall symmetrical shape without direct separations in the facade like the present condition, because that is what gives the appearance of three separate volumes.

The library can be changed completely unlike the rest of the recreation center because the library wasn’t what left a legacy, but it was rather an exterior of the building. The verticality of the chimney competes with the horizontality of the roof, thereby compromising the unitary reading of the three volumes together. As the facility is modernized, the need for a fireplace and its accompanying chimney becomes obsolete. By eliminating the chimney, additional space is created within the building while simultaneously preventing energy loss associated with heating and cooling systems. The recreation center’s 1920s and 1930s Art Deco style and parts of the Jacobethan style should be kept as they represent Detroit, preserve the legacy of the building, and help emphasize the importance of the building to people. However, the suggested changes should be made for modernity, functionality, and beauty.

Interior Space: Addition of Historical Museum

To further preserve the building's legacy, a historical museum should be added to showcase photographs and descriptions of the building’s history. This would include the journey of the building from its beginnings as a library in 1917 to its current state and also include notable figures like Joe Louis and Leon Wheeler, who have been associated with the building. The ideal location for this historical museum would be on the east side of the building, benefiting from sunlight through the high window. This positioning would create a cheerful, vibrant, and airy atmosphere for visitors, which aligns adequately with a museum setting.

METHODS

The qualitative approach primarily relied on trusted websites and articles, along with resources from Harvard's on-campus library and the Cambridge Centre for International Research Academy. Architectural insights were gathered through regular meetings and discussions with the professor, while a collaborative effort in analyzing images and content helped shape the proposal. To access blueprints and confidential information, a city clerk from Detroit was interviewed. An in-person visit to the Brewster Wheeler Recreation Center offered firsthand insight into the building's condition and its surroundings. The proposed mockup was developed based on this combined information.

RESULTS

Figure 1. Mockup Model of Proposal

Figure 2. A Birds Eye View of the Brewster Wheeler Recreation Center (This figure captured from Google Earth directly matches the photo on the top left side of Figure 1.)

The modern renovation of the building and its surrounding landscape have been envisioned in Fig 1. The historical integrity of the structure has been merged with modern design elements to create a space that not only honors its past but also serves as a hub for the community's present and future needs.

The renovation mainly involves a flat section of the roof, complemented by a pitched portion, with the higher side oriented towards the east. With the sun rising from the east, the east-facing wall has been amplified with expansive windows, ensuring that the interior would be bathed in warm sunlight, creating a vibrant and inviting ambiance.

The landscaping was carefully designed to have a harmonious blend of sports and recreation, taking advantage of the expansive land surrounding the building. Because the Brewster Wheeler Recreation Center is intended to be a vibrant community hub, sports fields such as soccer and baseball fields, along with a park-style resting area have been added. That way, the community can engage in a variety of recreational activities while immersing themselves in the rich history of the area.

CONCLUSION

The center was not only a building but a hallmark of history in the African American community. It was a gathering place for community members to engage in recreational activities and socialize, and this center was mainly known as Joe Louis' training grounds.[14] This meant that the building included a cultural representation of African Americans. It went through many phases with the good being the building's opening and the bad being its closing. Still, it had many historical events such as the Harlem Globetrotters playing their first game in the center, and Joe Louis training here. The center has left its legacy as a truly influential building, which is why something should be done to reactivate it. The "permanent closing" should become a "temporary closing".

LIMITATIONS

The Buildings, Safety Engineering, and Environmental Department of Detroit was contacted for floor plans or additional information, but they only had records for buildings constructed in 1990 or later. While obtaining floor plans would have been beneficial, it was not possible. An in-person visit to the Brewster Wheeler Recreation Center was conducted, but the building was fenced off, and the windows were boarded up, limiting access. As a result, only online images were available to piece together the building's interior layout.

NOTES

[1] Siobhan Gregory, "Authenticity and Luxury Branding in a Renewing Detroit Landscape," *Journal of Cultural Geography* 36, no. 2 (2019): 182-210, https://doi.org/10.1080/08873631.2019.1595913.
[2] Cynthia N. Moore, *Yesterday, Today, and Tomorrow: The Oral Narratives of Three Generations of Brewster Old Timers* (PhD diss., Wayne State University, 2001).
[3] Frank B. Woodford, *Parnassus on Main Street: A History of the Detroit Public Library* (Detroit: Wayne State University Press, 1965), 437.
[4] City of Detroit City Council Historic Designation Advisory Board, *Final Report: Proposed Brewster-Wheeler Recreation Center Historic District* (2014), https://detroitmi.gov/sites/detroitmi.localhost/files/2018-08/Brewster%20Wheeler%20Recreation%20Center%20FINAL%20REPORT.pdf.
[5] Richard Bak, *Joe Louis: The Great Black Hope* (Detroit: Wayne State University Press, 1998), 293.
[6] Robert Conot, *American Odyssey: A History of a Great City* (New York: Knopf, 1986), 362–364, 374, 545.
[7] Richard Bak, *Detroit Across Three Centuries* (Detroit: Wayne State University Press, 2001), 257, 262.
[8] Thomas J. Sugrue, *The Origins of the Urban Crisis: Race and Inequality in Postwar Detroit* (Princeton: Princeton University Press, 1997), 49–50, 86.
[9] Traqina Quarks Emeka, "Detroit Riot of 1967," *Encyclopedia Britannica*, accessed January 9, 2025, https://www.britannica.com/event/Detroit-Riot-of-1967.
[10] T. Burton, *Home in Detroit* (Detroit: Detroit Historical Society, 2008), 90.
[11] Paul Beshouri, "$50M Plan Saves Historic Brewster-Wheeler Rec Center," *Curbed Detroit*, April 14, 2015, https://detroit.curbed.com/2015/4/14/9970898/50m-plan-saves-the-famous-brewsterwheeler-rec-center.
[12] Nikola Petrovski, "Brewster-Wheeler Recreation Centre: Where Champions Were Made," *Abandoned Spaces*, September 15, 2017, https://www.abandonedspaces.com/public/brewster-wheeler-recreation-centre-where-champions-were-made.html.
[13] Abigail A. Van Slyck, *Free to All: Carnegie Libraries & American Culture, 1890-1920* (Chicago: University of Chicago Press, 1995), 189.
[14] Lindy Lindell, "Metro Detroit Boxing," *Detroit Boxing Journal*, August 12, 2001.

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ARCHITECTURE OF SUBTRACTION: AN AFFIRMATIVE DIALECTICAL APPROACH IN EXPLORING SUBTRACTIONS IN ARCHITECTURE

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INTRODUCTION

French philosopher Alain Badiou proposes a dialectics that is based on positivity. He argues that "negativity, properly speaking, does not create anything new".[1] In Badiou's dialectics, he named the negative part – destruction, and the positive/affirmative part – subtraction, where subtraction leads to producing new. Architecture in responding to the current climate emergency practices a parallel notion that looks into *new* solutions of retrofitting existing structures, building upon what already exists, and designs that minimize new construction. It can be perceived as a reversal of architecture that is mainly associated with adding new structures and development under the construction-tied building sector.[2] A paradoxical condition as the concept of addition inherently resonates with the essence of architecture and the built environment. Yet, the very act of constructing buildings, infrastructure, and urban development involves simultaneous resource, energy, and land subtraction. The paper exposes this paradox beyond building applications. It mainly explores the affirmative dialectics of Badiou as a theoretical framework with its subtraction component in investigating architectural subtractions and its related ideas of less, removal, and taking away.

Architects explicitly mention subtraction either in the physical sense or the conceptual sense in relation to geometry. Taken both as it is which is more common in physical applications and as a metaphor in nonphysical ones. It frequently coexists alongside addition, generating a situation in which subtraction and addition are inextricably intertwined. A duo that observes an underlying oppositional position and contradiction. In this regard, the affirmative dialectics of Alain Badiou as a framework to deal with the duality that instead of negativity—which creates the new by destroying the old—to a constructive kind that involves subtraction.[3] Badiou's ideas are connected with Italian poet Pier Paolo Pasolini whose life and work are contradictions without synthesis or reconciliation. Pasolini's ideas are visualised with figures like the Rubin Vase (Figure 1) or the duck and rabbit illusion. These images are perceived in two distinct ways, exhibiting some level of contrast, yet they also rely on each other, forming a cohesive whole that would not function independently.[4]

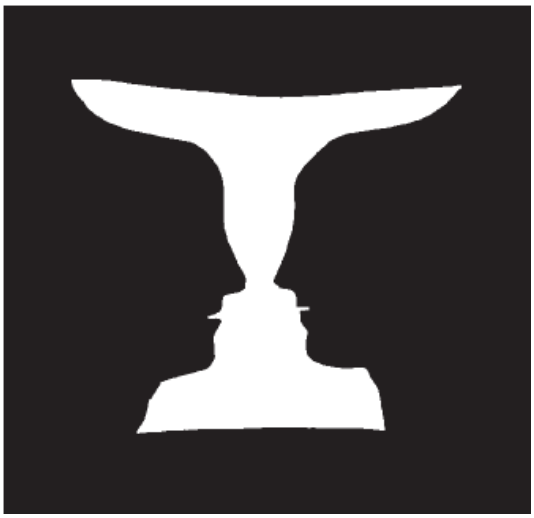

Figure 1. Rubin Vase

This paper reviews the relevant literature within architectural history and theory about subtraction with the suggested framework. Subtraction discourses as found can be categorised into two. The first category is *as an alternative* where subtractions' oppositional nature is highlighted more against dominant ideas relating mainly to addition. The second category is *as the other*, where subtraction at a neutral stance continues on contrasting notions that expose more of a paradoxical ambiguity. Similarities and parallels will be drawn along with contrasting understandings that expose consistency, nuances, and expandable possibilities of the concept of subtraction. The purpose of this paper is to bring together different architectural subtraction discussions elaborating on the potential and tendencies of subtraction in different applications. It does not propose a new solution for architecture and its existing issues but theorizes a way on how new solutions can be produced providing more options in responding to current architectural problems. It also does not suggest a fixed framework for investigating architectural subtractions instead it provides an expandable constitution founded on affirmative dialectics which has accessed the essence for its further potential.

SUBTRACTION AS AN ALTERNATIVE

An already expanded research on architectural subtraction can be traced to Professor Keller Easterling. The book titled *Subtraction*, culminates her ideas on less that emphasizes a subtractive economy through building removals negotiated as an alternative against the dominant additive construction and development. Easterling sees an opportunity for reuse culture, disassembly, and circular construction, indicating an existing economy already based on subtraction. Easterling argues that when subtraction is accepted as a tool, it can align with architectural values that prioritize simplicity and the removal of excess beyond economic applications. Subtraction for Easterling like its addition counterpart can also be viewed as growth expanding the repertoire and territory of form-making as it deals not just with shape but the overall composition of space.[5]

However, Easterling also highlights the main hindrances in pursuing subtraction. Firstly, subtraction is often perceived negatively, associated with demolition, destruction, and loss. Another is architecture is traditionally seen as a constructive activity with an emphasis on development and creation. This is supported by how architects are not specifically trained in subtractive methods, such as demolishing, imploding, or removing building materials. The impartiality furthers on how demolition plans occupy the first pages of building documents preceding architectural drawings yet are deemed out of the process of design.[6] This leads to the idea that the building envelope is always

the solution to any problem as architects are also expected to produce durable and permanently built structures.

Subtraction for Professor Leidy Klotz in *Subtract: The Untapped Science of Less* extends the discussion into a more general discourse. He mentions subtraction as an end-state of less that actually entails doing more. This less beyond more, he calls a "post-satisficed less" which gets to the better outcome or solution where the term is from satisficing which is a mix of satisfying and sufficing.[7] He furthers that going beyond the satisfying that is sufficient is the capacity of his subtraction. He mentions, "To get to post-satisficed less often requires that we have already added [...] not starting from zero-because adding first erects a mental obstacle to less. Whatever is there must be either necessary or too much trouble to reinvent."[8] This potential for subtraction for Klotz is well suited in dealing with complex systems where the key is finding the essence. Essence is what is left when details that are unnecessary and minor are removed. Systems, he adds, are complex but there is a start, a bottom line, the most important – an essence.

Regarding the paradox, Klotz argues that subtraction should be considered alongside addition. Yet opposition is the focus of his discussion adding to Easterling's hindrances by identifying a general problem to subtraction - it is overlooked. An empirical study confirms a defaulting to additive transformations while rarely considering subtractive options. The neglect of subtraction is found to be because addition is more mentally accessible.[9]

Architectural Subtraction Examples

The extensive discussion of Klotz and Easterling already provides architectural and general potential of subtraction and so is its hindrances. Both discussions also include compelling subtraction examples.

Artistic Subtractions

The works of Gordon Matta Clark as an architect turned artist are creative translations of subtraction through different versions of removal involving splits and holes in soon-to-be-demolished buildings as forms of retaliation or exploring building life and death. There is also a work about awkward spaces in the city exploring surveying errors and zoning oddities that escaped the interest of real estate.[10] Art as a form of criticism for Clark was found to originate in his early reaction to the modernist vision of order and classical perfection.[11] His work then celebrated the chaotic, diverse, and wild combination of eras and styles of the inner city.

Disassembly and Assembly

Dan Hoffman purchased a one-dollar house that was later carefully separated, inventoried, and dismantled into component pieces.[12] The idea is related to making and unmaking, assembly and disassembly which further connects to the issues of obsolescence, reuse value, and repair contra replacement. This raises a comparison into building systematically yet the deletion of buildings is through explosions.

Non-Building and Non-plan

Cedric Price's Fun Palace and the concept of Non-Plan, developed with Reyner Banham, Paul Barker, and Peter Hall are also subtractive strategies in architecture. The Fun Palace embodies a flexible architecture with an open plan without a fixed program that can be located anywhere maximizing existing site conditions, transport connections and vista.[13] The Non-Plan on the other hand is posed as an alternative initiative that lets people shape their own environment versus the non-democratic and

capitalistically charged planning letting locations thrive on their own, not the usual elaborate development, but a more people-influenced type of growth.[14]

Active Forms and Field

The layout of Savannah, Georgia by James Oglethorpe is another subtraction example. Unlike a traditional master plan, it emphasises activities or active forms that dictate what urban components or object forms which are to be present - buildings, cities, and landscapes.[15] Easterling explored the Savannah further for its potential of building removals as the active form emphasis may lead to both building and unbuilding. Klotz was also keen on Savannah's focus on open and connecting spaces that he traces back to it being an early example of planning design considering social equity.[16]

Cut and Scar on Earth

Maya Lin's Vietnam Veterans Memorial represents a subtractive approach in its minimal translation. Just a black granite wall serving as a cut into the earth representing both an initial act of violence and a space for healing.[17] It also embodies the emphasis on the lives that are lost instead of the usual celebrations of victors for memorials. Klotz mentions that the simplicity of structure holds beyond greater discourse and representations that exemplify a less that is more.[18]

Both Easterling and Klotz illustrate that subtraction offers unique architectural and conceptual possibilities by choosing alternatives to the usual dominant ways. The examples they provide highlight its potential as a tool for creative, economic, and social transformation in architecture.

SUBTRACTION AS THE OTHER

At some point in history, architecture was (if not still is) preoccupied with the production of forms. Subtraction persists in this sense along with addition as a universal component in creating new forms. In architecture, there is an idea that certain design principles or features can be applied across different cultures, contexts, and time periods, resulting in buildings that are universally appreciated. Architect and professor Roger Clark in *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis* analyzes over a hundred buildings to be able to extract formal archetypal patterns that managed to persist through time that are not contextual or site-specific and thus as he discussed universal. Clark found an addition about assembly where parts are dominant while subtraction is the removal of parts where the whole is dominant.[19] Architectural historian Kenneth Moffet offers a reversal as his analysis uses an initial "base case" solid that is refined through either addition or subtraction producing morphological transformations.[20] Moffet's subtraction echoes his reversed methodology where subtraction is the "removal of what is not fitting" contrasted to addition which is said to begin with a number of elements that eventually totals to one.[21]

His work also underlies the universality of addition and subtraction, not just limited to form applications but beyond. He furthers, "Additive and subtractive form, familiar topics in analyses of architecture's fundamentals […] have a place in a larger order of forming methods …". Additionally, "Far from simple models for form, addition and subtraction are complex subsets of this larger interrelated series of approaches, capable of elucidating much of the broad gamut of built form."[22]

Moffet also mentions an extreme physical application of subtraction, he calls this the "Ultimate Subtraction". He takes inspiration from the "ultimate vernacular subtractive housing" of caves or cave-like environments cut from live rock and hollowed out where the ultimate subtraction will be a building made invisible. Adding that, "Making a building hard to see—burying it, screening it, dematerializing it—these would be the practical limits of subtraction as a mode of forming."[23]

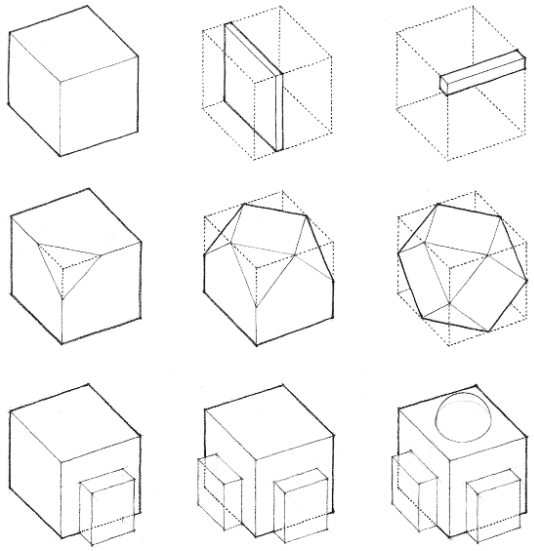

Figure 2. Dimensional, Subtractive and Additive Transformations

Professor Francis D. K. Ching in *Form, Space, Order* discusses transformation processes also involving subtraction as the other to addition. Mentioning how, "All other forms can be understood to be transformations of the platonic solids, variations that are generated by the manipulation of their dimensions or by the subtraction or addition of elements."[24] Figure 2 shows Ching's visualization of the idea with a cube transformation where volumes are dimensionally altered to be smaller or longer (top row), added with more components (last row), or a subtraction (second row) by taking away volumes. In transforming through subtraction, Ching furthers how much or how little of the deduction will determine if the origin solid is still recognizable.[25] As seen in Figure 2 of the second row that represents subtractive transformations where if little is reduced then it can still be recognised as a previous cube (middle second row), while deducting too much might make it into a different polygon with an unrecognizable origin (last image in the second row). The tricky part is that Ching mentions that addition operates exactly the same. Too much of an addition alters its origin making it unrecognizable whilst a little edit will not. The only difference is that volume is added. To expose more of this tricky part, Figure 3 is created to show a similar output from an addition versus subtraction process. More specifically it shows how the same example used by Ching to explain subtraction which is a cuboctahedron from removed sides can also be combined pyramids and cuboid. Dimensional transformation aids out in this ambiguous equation by operating differently and is usually an accessory or minor to the other two. To further investigate this idea, a building example mentioned by Ching will be used. He exemplified the Benacerraf House Addition by Michael Graves as a subtraction interpreted to be from a cube where a huge portion of the interior is deducted along with openings in its surface (Figure 4). However, it can also be taken from an addition angle. In an additive approach, the standing planes from a dimensional transformation with subtracted surfaces are added together (Figure 5).

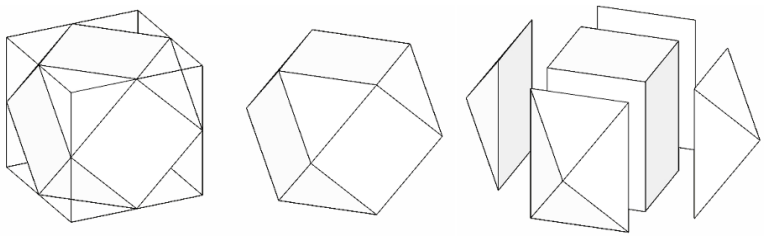

Figure 3. Cuboctahedron from Additive versus Subtractive Process

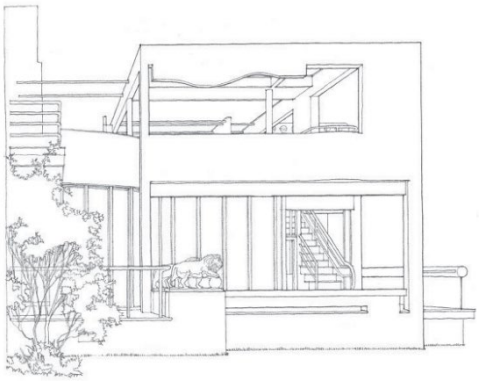

Figure 4. Benacerraf House Addition by Michael Graves

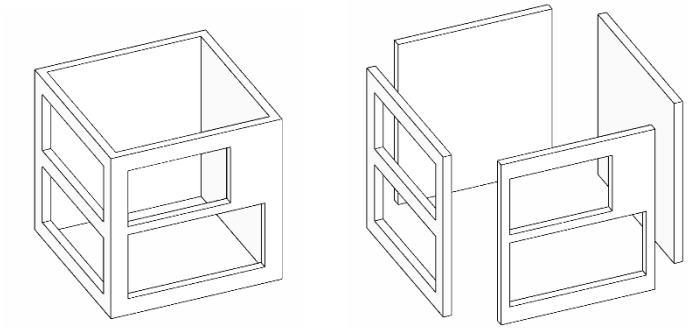

Figure 5. Additive process versus Subtractive process Applied

Another layer to this discourse can be found in Peter Eisenman's search for an overarching architectural form concept that he prefers more to be addressed as language. For Eisenman, form deals mainly with the opposing internal and external environmental requirements.[26] His discussion necessitates, like Ching, to start with the platonic solids as necessary absolutes but instead of form transformation, Eisenman diverges to volumetric concepts putting mass-solid system versus surface system. These opposing systems create diverging perceptions of building form. In the mass-solid system a building can be viewed as a solid-cut-away while in a surface system, the same building can be seen as additive planes. He mentions, "The concept of an additive as opposed to a cutaway building can be used in a dialectical situation to produce a purposeful ambiguity and a resultant tension in the external form. This ambiguity may perceptually denote a conceptual opposition inherent in the internal and external requirements."[27] A perceptual separation is connected with the notion of "structure-minded" and "cavity-minded" architects.[28] Architect and urban planner Steen Eiler Rasmussen discussed this dual of solids and cavities, where the structure-minded architects deal with the solids of the buildings while the cavity-minded designers remove and eliminate materials more concerned with space. Rasmussen connects his duality with the Rubin Vase, similar to the representation of the framework, where the choice between the two is a matter of shifting perception. Moreover, it was discussed that the creative combination of solids and cavities is what leads to the best results.

CONCLUSION

The paper explores the concept of subtraction in architectural discourse through the affirmative dialectics of Alain Badiou. Through this framework, architectural subtraction emerges not just as a method of removing or taking away but as a nuanced process of refinement, simplification, and transformation that produces new forms and possibilities.

The study finds this potential rooted in the duality of addition and subtraction reflected mainly in the works of thinkers like Keller Easterling and Leidy Klotz. Addition and subtraction and connected semantics of building and unbuilding, activity (intangible) and object (tangible), construction and destruction, fixed and flexible, less and more, and others are maximized in a manner that is both oppositional and intertwined. Addition represents a dominant mode of architectural practice, subtraction emerges as a connected yet alternative proposition, offering a way to think differently about space, form, and the built environment.

The dualistic positions in polar opposition are maintained by Roger Clark and Kenneth Moffet having reversal perceptions of subtraction and addition. Francis D. K. Ching and Peter Eisenman provided a paradoxical and dialectical condition where what separates addition and subtraction is a matter of selection. The distinction between the two is blurred, revealing inherent ambiguities and interdependencies that complicate clear categorizations. This is where the discussed hindrances of subtraction will matter where:

- Subtraction is perceived negatively,

Architecture is traditionally seen as a constructive activity,

Architects are not trained to subtract,

The building envelope is always the solution to the problem, and

Subtraction is overlooked

This study then recommends further analysis not just on the potential and application of subtraction but also on critically examining possible ongoing hindrances of pursuing subtractive options. This then will find its importance in the current problems the discipline is facing specifically a climate emergency that is continuously escalating. Subtraction offers expanded and viable solutions that invite to thinking beyond adding more, challenging traditional views and strategies, and looking into neglected or unexplored counterparts.

NOTES

[1] Alain Badiou, “We Need a Popular Discipline: Contemporary Politics and the Crisis of the Negative,” *Critical Inquiry*. Vol. 34, no. 4 (Summer 2008): 652.
[2] Jill Stoner, “Architecture in Reverse (or Architecture by Subtraction),” The third in a series of articles by Jill Stoner, Professor of Architecture, University of California, Berkeley, n.d., https://www.huduser.gov/portal/pdredge/pdr_edge_featd_article_090913.html. She parallels architecture reversal to architecture of subtraction specific on economic merits mentioning that “emptiness is seen as absence of value”.
[3] Badiou, *Critical Inquiry*, 645–59; Alain Badiou, “Destruction, Negation, Subtraction,” *The Scandal of Self-Contradiction: Pasolini’s Multistable Subjectivities, Geographies, Traditions*. ed. by Luca Di Blasi, Manuele Gragnolati, and Christoph F. E. Holzhey, Cultural Inquiry, 6 (Vienna: Turia + Kant, 2012): 269–77; Alain Badiou, “1 From Logic to Anthropology: Affirmative Dialectics,” *Badiou and the Political Condition* (Edinburgh: Edinburgh University Press, 2014), 45-55
[4] Luca Di Blasi, Gragnolati M. Manuele and Christoph F. E. Holzhey, *The Scandal of Self-Contradiction: Pasolini’s Multistable Subjectivities, Geographies, Traditions* (Series Cultural Inquiry, 2012), 7-15.
[5] Keller Easterling, “Subtraction,” *Perspecta*. Vol. 34 (2003), 82; Keller Easterling. *Subtraction* (Berlin, Sternberg Press, 2014), 8.
[6] Easterling, Subtraction-*Perspecta*, 81.
[7] Leidy Klotz, *Subtract: The Untapped Science of Less* (USA: Flatiron Books, 2021), 144.
[8] Klotz, *Subtract*, 151.
[9] Gabrielle S. Adams, Benjamin A. Converse, Andrew H. Hales, and Leidy E. Klotz, “People systematically overlook subtractive changes,” *Nature*. Vol. 592, no. 7853 (April 2021): 258–261. The same findings appear in Klotz’s book about subtraction in Chapter 1.
[10] Easterling, *Subtraction*, 35-36.
[11] James Attlee, “Towards Anarchitecture: Gordon Matta-Clark and Le Corbusier”. *Tate Papers* no.7 (2007), https://www.tate.org.uk/research/tate-papers/07/towards-anarchitecture-gordon-matta-clark-and-le-corbusier.
[12] Easterling, *Subtraction*, 36.
[13] Samantha Hardingham, *Cedric Price Works 1952–2003*. Volume 2 (Montreal: Architectural Association Publications in collaboration with the Canadian Centre for Architecture, 2016), 21-28.
[14] Paul Barker, “Paul Barker: Thinking the Unthinkable,” *Non-Plan: Essays on Freedom, Participation and Change in Modern Architecture and Urbanism*. Jonathan Hughes and Simon Sadler (eds.) (Routledge. London, 1999), 2-21.
[15] Easterling, *Subtraction*, 40-42.
[16] Maya Ying Lin, *Boundaries* (New York: Simon & Schuster, 2000), 4:10.
[17] Klotz, *Subtract*, 91-95.
[18] Klotz, *Subtract*, 95-98.
[19] Roger H. Clark, *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis* (John Wiley & Sons, Inc., 2012), 280-281.
[20] Kenneth M. Moffet, *Forming and Centering: Foundational Aspects of Architectural Design* (Emerald Publishing Limited,2017), 74.
[21] Moffet, *Forming and Centering*, 73.
[22] Moffet, *Forming and Centering*, 3.
[23] Moffet, *Forming and Centering*, 99.
[24] Francis D.K. Ching, *Architecture: Form, Space and Order* (New York [u.a.]: Van Nostrand Reinhold, 1979), 64. The following editions, the second in 1996, the third in 2007, and the fourth in 2015 changed from platonic to primary. The merit is how the book's content has become a canon in architecture practice and education.
[25] Francis D.K. Ching, *Form, Space and Order*. Fourth Edition (Hoboken, New Jersey: John Wiley & Sons, Inc., 2015), 61.
[26] Peter Eisenman, *The Formal Basis of Modern Architecture* (Lars Muller Publishers, 2006). Original Submitted in August 1963.
[27] Eisenman, *The Formal Basis*, 81.
[28] Steen Eiler Rasmussen, *Experiencing Architecture* (The MIT Press,1964), 48.

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EDUCATION OF COLLECTIVE PERCEPTIONS: FROM INDUSTRIAL SITE TO A SHOPPING MALL

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INTRODUCTION

Industrial structures reflect the resources and potentials of cities and have, over time, become strong representations of the industrial period. They have also played a role in reconfiguring cityscapes, forming the basic dynamics of city culture and urban identity. However, industrial structures and the surrounding living areas in old city centers have, over the years, become dysfunctional, leading to the creation of urban depression areas.[1] Neoliberal restructuring of cities has followed, introducing new spatial organizations that involve the management of dysfunctional industrial sites in old city centers and initiating urban regeneration projects. These regeneration projects, which aim to conserve industrial heritage and regenerate spatial configurations, play a crucial role in preserving the social, economic, and cultural identity of the hosting city.[2] Therefore, it is of great importance to prevent the evaporation of the intangible meaning and public role that these structures hold in the collective memory accumulated over time. Moreover, the matter of conservation and heritage intersects not only through social and physical configurations but also through planning practices, representing the legitimacy of spatial configuration.[3]

Hence, this study examines the regeneration process of the Samsun Tekel Factory in Turkey, one of the industrial heritage sites that represents the socio-economic identity and culture of the city. The aim of the research is to trace the loss of intangible qualities, such as social and cultural identity, represented by this industrial site through the collective memory of the citizens. The argument posits that such evaporation occurred due to the limited scope of Samsun Tekel Factory's regeneration efforts, which focus solely on land use and physical transformation from industrial heritage to shopping mall. The research also aims to draw attention to planning practices concerning the urban regeneration of heritage sites. The study is structured around three dimensions: legal, physical, and social. The intersection of these dimensions emphasizes the importance of the "education of collective perception," a concept derived from Marc Auge's "education of gaze"[4] (2008) that the authors elaborate on. While doing that the research targets to contribute to the discussion of regeneration practices of the industrial heritage sites as the socio-economic and cultural representation of cities in the era of neo-liberalisation provoking an evaporation of these representation and therefore, distortion to social sustainability.

INDUSTRIAL HERITAGE, NEOLIBERAL URBANISM, AND THE PRESERVATION OF CULTURAL IDENTITY

Space is conceptualized not just through its physical attributes but also through its social production, shaped by networks, relations, and lived experiences.[5] It embodies identity relations, expressed through collective memories and meanings that extend beyond daily experiences.[6] However, space is also historically contingent, shaped by capitalist social relations within neoliberal contexts, making it vulnerable to becoming what Augé[7] defines as "nonplaces"—spaces where authenticity is diminished. The rapid transformation of contemporary urban spaces, driven by consumption, communication, and circulation, has led to the rise of uniform, placeless spaces like supermarkets and shopping centers.[8] This process, often propelled by global capitalism, privatization, and commodification, reshapes cities into inhospitable environments that erase collective memory and diminish the meaning of public spaces.[9] These dynamics are especially pronounced in (industrial) heritage sites, where the tension between preserving cultural identity and accommodating new uses becomes a central conflict.[10]

Industrial heritage; consists of remnants of industrial culture, materials, meanings, memories of industrial culture with historical, architectural and social value and all are collectively referred to as Industrial Heritage.[11] The International Committee for the Conservation of the Industrial Heritage (TICCIH) collaborated with the International Council on Monuments and Sites (ICOMOS) in 2000, joining United Nations-centered organizations and contributing to the universalization of the concept of Industrial Heritage.[12] In the Nizhny Tagil Charter for Industrial Heritage, TICCIH emphasizes the importance of maintaining functional integrity in industrial sites, warning that removing machinery or subsidiary elements can significantly reduce the value and authenticity of a site. The Charter also advocates for adaptive reuse that respects significant materials and original patterns of activity, ensuring compatibility with the site's historical use. Moreover, it stresses the importance of preserving human skills related to obsolete industrial processes and the careful documentation and transmission of these skills to future generations, alongside the preservation of records, archives, and product specimens.

The Industrial Revolution introduced new production methods that, in turn, brought about new organizational structures and ideas within urban spaces. As industry evolved alongside urban dynamics, it directly or indirectly influenced the location choices of urban functions, particularly residential areas. Over time, many industrial structures failed to adapt to advancing technology, and the transition from Fordist to post-Fordist production systems led to the obsolescence of large-scale buildings within urban areas.[13] By the 1970s, the decentralization of industrial and production activities gave rise to new centers and sub-centers, leaving large industrial buildings and their surrounding residential areas in old city centers functionless, thus creating urban decay zones.[14] During the transformation of these obsolete industrial buildings, the erasure of images related to their original use and their replacement with entirely new ones can erase traces of collective memory, altering the perception of publicness and leading to the formation of a 'new publicness'.[15] In preserving industrial buildings for future generations, it is essential to maintain both their functional and physical integrity without neglecting their original identity.[16]

Industrial sites, which spread rapidly after the industrial revolution, inevitably lose their functionality and become idle over time due to the developing technology and changing conditions within cities. Before and during this process of change, the spaces where production takes place have gained their tangible and intangible meaning through the experiences and memories of the users therefore generated a strong collective and cultural memory while playing a vital role in reconfiguring cityscapes, forming the basic dynamics of city culture and urban identity. Therefore, derelict industrial areas have the risk of their authenticity to become diminished. Heritage is a cultural process in which the local community should play the central role in defining, valuing, and managing what

constitutes heritage.[17] Although heritage sites obtain a great capacity for collective identity, anchoring communities via sense of belonging and therefore meaning attributed (cultural or economic) determines the value and impact[18] if their value has not been adequately acknowledged has the risk of exclusion[19] and transform into a condition of placelessness through the inauthentic experience of cities 'supported by mass communication, mass culture, big business, powerful central authority and economic structure'.[20] Here, the critique is towards respecting the cultural, historical value that would match with local needs while presenting economic viability, where the misconception of culture-based reuse would generate lower profit than other alternatives.[21] Therefore, to speak of success in the protection of cultural heritage sites, it is essential to consider these areas holistically and evaluate all their tangible and intangible potentials.[22]

Similar to the accelerated industrialization process brought about by the Industrial Revolution globally, the establishment of factories with both domestic and foreign capital in the Ottoman Empire began in the 1880s, following the signing of free trade agreements.[23] In Turkey, the addition of new factory investments through development plans, alongside pre-Republican factories, was influenced by global challenges, leading to the creation of urban decay areas over time. The concept of industrial heritage preservation in Turkey emerged in the 1990s as factories from the pre-Republican and early Republican periods became obsolete.[24] The privatization of state economic enterprises accelerated after the 1990s, culminating in the decision to privatize the state monopoly in 2002.[25] Industrial structures, located on valuable urban land, have undergone transformation into new structures or functions based on their architectural characteristics. These industrial structures, considered as part of industrial heritage transformation, have been refunctioned, often with an emphasis on exchange value within the context of neoliberal urban policies, resulting in structural changes and refunctioning.[26]

In Turkey, the concept of industrial heritage emerged as factories from the late Ottoman and early Republican periods became obsolete. The first examples of its application were observed in the late 1980s with the rehabilitation of the shores of the Golden Horn. During these rehabilitation efforts, the refunctioning of registered factory buildings marked the first examples of this practice. In the process of transforming industrial structures, various buildings were refunctioned with different functions such as education, museums, convention-exhibition centers, and shopping centers. However, these transformations sometimes failed to preserve the original identity of the structures, leading to the loss of their images in the collective memory. This study examines the project that transformed the Samsun Tobacco Factory, located in the İlkadım district of Samsun, into the Bulvar Shopping and Life Center in 2009, following its closure during 90s, after its initial establishment in 1887. The study focuses on how the physical transformation during the refunctioning process led to the loss of its original identity and the creation of a new meaning for the site.

While a detailed discussion is beyond the scope here, it is important to highlight that the rise of shopping malls and changes in Turkey's retail sector reflect neoliberal trends shaped by the country's political and economic restructuring. Over the past 20 years, this rapid transformation, driven by policies aimed at land commodification, has significantly impacted the built environment.[27] The relationship between neoliberal restructuring and urban space varies, with the state, particularly through planning regulations, creating conditions for the market to operate.[28] Consequently, historical city centers have also been aggressively affected by these commodification efforts. The detailed guidelines in the TICCIH's Nizhny Tagil Charter for Industrial Heritage emphasize the importance of maintaining and conserving the values of industrial heritage, including the legal protection of its intangible qualities. However, the case of the Samsun Tobacco Factory and its regeneration process fails to meet these standards, particularly in terms of respecting and maintaining compatibility with the site's previous use.

METHODOLOGY

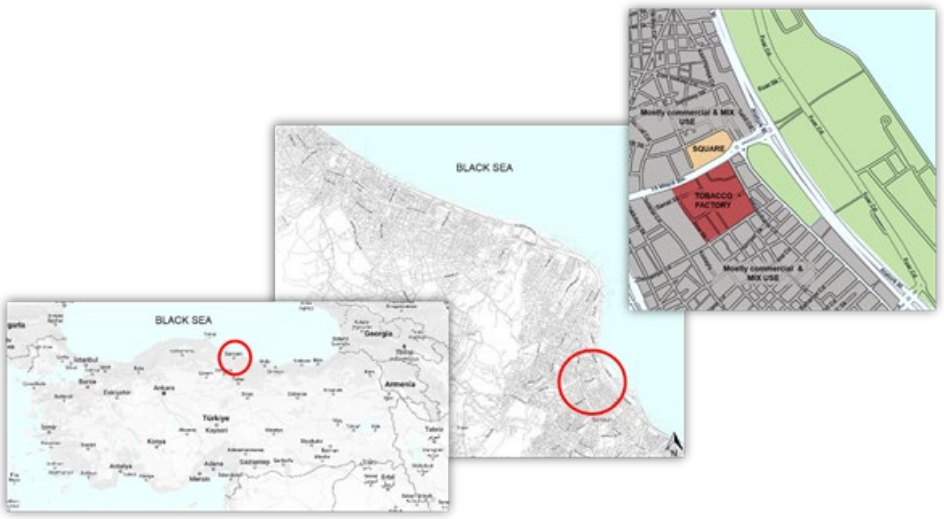

Figure 1. Location of the case study, the city Samsun and Tobacco factory / Bulvar Shopping Centre

The case study area in Samsun formerly called Tobacco Factory and currently is Bulvar Shopping Centre is located in the historical town center of city Samsun facing Black Sea at the north of Turkey (Figure 1). The building is located at the intersection of the historic Mecidiye and Gazi Streets, across the main square (Cumhuriyet square) of the city. In the process of examining the transformation of the Samsun Tobacco Factory and its effects on collective perception, both quantitative and qualitative methods were utilized, drawing on two primary data sources. As secondary data sources, various scale zoning plans from municipal archives, as well as historical institutional and personal archives relevant to the region of the study area, were reviewed. The primary data sources involved conducting interviews with 15 randomly selected individuals from within the study area, along with an additional 5 professionals who were key decision-makers involved in the transformation process of the site. However, as this research is ongoing, the interviews have not yet been fully completed. To date, interviews have been conducted with 2 key informants and 5 randomly selected individuals.

Additionally, a survey was conducted with 392 users selected through simple random sampling at various times and on different days within the study area. In determining the sample size, the statistical population of the district to which the study area belongs was chosen as the universe. Literature research revealed that for populations of 500,000, a sample size of 385 individuals is typically used with a 95% confidence interval. The sample size for the survey was accordingly selected to ensure a 95% confidence interval.

After data collection, the analysis began by identifying the frequency (f) and percentages (%) of participants to determine the participant structure. The reliability of the data was assessed using the Cronbach's Alpha value, while skewness and kurtosis values were examined to check for normal distribution. During the analysis process, correlation analysis was used to identify relationships between two quantitative variables, and Chi-Square analysis was applied to assess relationships between two qualitative variables. Regression analysis was conducted to determine whether there was a relationship between dependent and independent variables. For examining potential significant differences between two independent groups of variables, the Independent Samples t-Test or the Mann-Whitney U test was used. When analyzing potential significant differences among more than two independent groups of variables, One-Way ANOVA and Kruskal-Wallis H tests were employed.

The Paired Samples t-Test method was utilized to examine possible significant differences between the means of two dependent groups.

SETTING THE SCENE: SAMSUN TOBACCO FACTORY AS THE CENTRE OF PRODUCTION ND LABOUR FORCE

In the late Ottoman period, tobacco cultivation, harvesting, distribution, and trade were entirely under the control of the French Tobacco Regie Administration.[29] The Samsun Tobacco Factory was strategically built in the central district of Samsun following French tobacco investments in Istanbul and Izmir, due to the region's favorable port access provided by transportation connections in the Black Sea region and the presence of fertile land suitable for tobacco cultivation. Therefore, since the early 1800s, Samsun has been engaged in tobacco cultivation and trade.[30] Thus, tobacco cultivation, processing, and trade in Samsun have played a crucial role in the city's development and socio-economic structure. During the intense industrialization in Europe, the city held significant potential for European investors seeking raw materials and markets for their products; additionally, 19th-century Ottoman reforms aligned with capitalist urban demands, leading to the construction of new building types like government offices, city halls, and modern schools, further accelerated by the 1869 fire, which prompted the first modern urban planning efforts that shaped the new commercial Samsun.[31]

Figure 2. Samsun Tobacco Factory and Tobacco Bazaar visible together for the first time in 1905 dated reprinted plan.[32]

Before the central tobacco factory was established, the Samsun Tobacco (locally called *Duhan* meaning tobacco) Market was founded in 1870 to regulate tobacco trade and facilitate its export from the surrounding areas (Figure 2). This market consisted of large warehouse depots where all the tobacco grown in the Samsun region was collected and traded. Tobacco Market is a part of a public space dedicated to the registration, storage, processing, and trade of tobacco, comprising tobacco warehouses, a customs office, and a marketplace for farmers.[33] Seventeen years after the establishment of the Tobacco Market, the Samsun Tobacco Factory began operations in 1887. The narrow-gauge railway was first constructed on this street in Samsun to handle the heavy transportation of tobacco bales required for the tobacco trade between the Cigarette Factory, the Tobacco Market,

and the Tobacco Dock.[34] Initially starting with nine buildings, the factory expanded to 17 buildings over time, which included production areas, management offices, security, a cafeteria, an infirmary, and storage spaces.[35] However, only five of these buildings have survived to the present day, with the others being demolished at various times for different reasons. The first significant demolition occurred in 1980 when Blocks A and B (see Figure 3) in the southeastern part of the factory site were completely demolished to make way for a new mosque and accompanying market Project[36] During the same period, Block I in the western part of the factory was partially demolished due to the 19 Mayıs Boulevard Road project. Between the cessation of production and the beginning of the adaptive reuse process, Blocks C, D, and I were completely demolished, and the remaining buildings underwent adaptive reuse efforts.

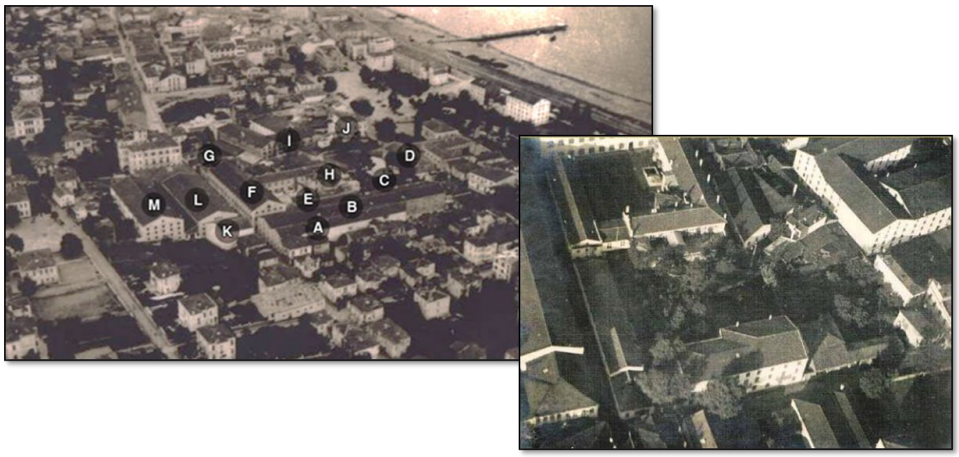

Figure 3. Aerial photo of Samsun Tobacco Factory dated[37]

The Samsun Tobacco Factory made a significant contribution to urban employment, particularly in terms of women's employment during that era. Following World War I, the factory employed 162 women and 144 men, highlighting its crucial role in providing job opportunities for women in various categories.[38] By the late 1940s, women made up two-thirds of the total workforce at the factory.[39] The Samsun Tobacco Factory, a key production site with a focus on female employment within the Samsun community, ceased operations during 90s. In 2006, a renewal and transformation decision were made, converting the site into the Bulvar Shopping and Life Center. This transformation process took a total of six years, during which all remaining structures were preserved.

Refuncitoning Process

The privatizations that accelerated with the liberalization policies of the 1980s, along with advancements in technology and production methods, and the expansion and densification of cities, necessitated the redefinition of urban spaces, particularly those occupied by production facilities within city centers. Consequently, when the Samsun Ballıca Factory opened, the tobacco factory in Samsun's city center ceased operations, and in 2008, this factory was privatized. As foreign companies began to dominate the tobacco market following TEKEL's (General Directorate of Tobacco, Tobacco Products, Salt, and Alcohol Enterprises) divestment of its cigarette factories, the demand and consumption of domestic tobacco dropped to its lowest levels due to the policies implemented by these foreign firms.[40] The cessation of production at the factory in 1994 left the facility idle. Until 2006, the factory grounds were used as a parking area, rendering the factory building completely nonfunctional. According to the implementation zoning plan enacted in 2005, the site was designated as a tourism, culture, and commercial center, with the parcels to the north

allocated for park and underground parking functions.[41] In 2006, the factory site was declared a renewal area by the President and the Council of Ministers, with plans to repurpose it as a shopping and life center. The architectural work and restoration process continued until 2012. It has been transformed into a 23,000 m² shopping center featuring seating areas, restaurants and cafes, shops and stores, as well as offices, where both local and international brands operate.[42] During the transformation process, the architectural plans prepared by Miyar Architecture Company reveal that the existing five buildings of the factory were preserved, and a new building was planned for the eastern part of the site. However, the decision for the new building, approved in 2007, was rejected in 2009 and has not been constructed to this day. The entire underground section of the factory's courtyard was planned and implemented as a parking area although the one of the buildings suggested by the company at the west site was eliminated during the implementation (Figure 5), while a portion of the courtyard was allocated for public use (Figure 4).

Figure 4. Left:Old Master Plan of the city including the section of Samsun Tobacco Factory dated 1988, Middle: Current Master Plan of the İlkadım District including the section of Samsun Tobacco Factory approval date 2021, Right Current landuse of the area including the section of Samsun Tobacco Factory completed by 2023

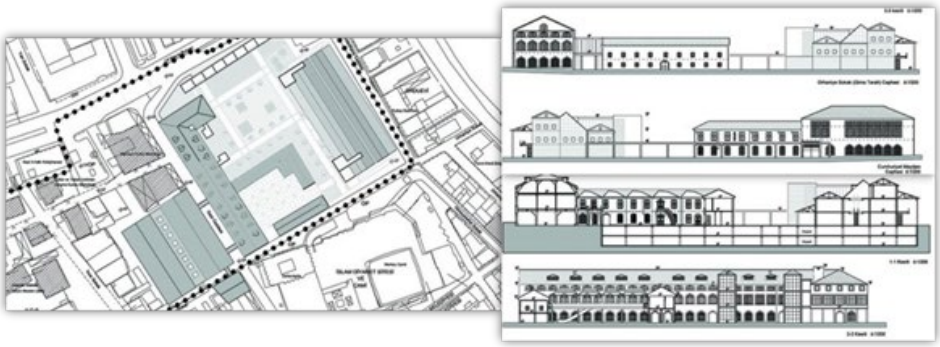

Figure 5. Regeneration Project prepared by the Miyar Architecture 2007[43]

Although all planning documents designate the site as a conservation area, none provides a comprehensive or holistic approach to reuse that preserves the site's inherent cultural identity. The preservation efforts have been limited to the architectural structures, neglecting the intangible cultural qualities that are essential for sustaining the heritage's full meaning. Consequently, both the approved planning documents and the restoration project failed to address the cultural significance of the site. As a result, none of the materials related to tobacco production have been preserved, nor has any informative urban furniture been designed to showcase this history, which once shaped the identity and memories of the city and its inhabitants.

RESULTS

In May 2024, the survey was conducted with 392 participants, featuring descriptive and interpretative questions aimed at exploring the traces of the Samsun Tobacco Factory in individual and collective memory, and examining the relationships or lack thereof that these memories have with Bulvar Shopping Centre, a representation of the site's spatial transformation. The study particularly highlights how different age groups perceive the change in collective memory and spatial perceptions following the transformation of the industrial heritage site into a shopping center, in the context of the "education of gaze" and the gradual loss of meaning over time.

When respondents were asked about structures that reflect the city identity of Samsun, the most common answers were the Onur Monument, the Bandırma Ferry, and the Tobacco Factory. Interestingly, even among those who were aware of the site's previous use, most did not consider Bulvar Shopping Centre as an important historical building. Only 21% (84 interviewees see Table 1) regarded the Samsun Tobacco Factory/Bulvar Shopping Centre as an important historical and cultural heritage site.

Age		**The 84 Interviewee Considered Bulvar Shopping Center Is Among Samsun's Heritage Sites**
18-25	124	28
26-44	122	20
44-59	80	20
60+	65	16
Family Residency in Samsun (%)		
Yes	72.6	60
No	27.4	24
How Many Years Have You Been Residing in Samsun		
Less Than 1 Year	13	7
1-5 Years	69	15
6-10 Years	38	4
10+ Years	234	46
Not Residing(Visitor)	38	12

Table 1. How The 84 Interviewee Considered Bulvar Shopping Center Is Among Samsun's Heritage Sites Disturbed to other questions

A significant portion of the respondents mentioned, even though it wasn't directly asked in the survey, that a family member had worked at the factory. They also shared that in addition to the memories they heard from their elders, the smell of tobacco in the area was one of the key features that gave the place its identity. However, they emphasized that with the absence of any elements related to production, these memories can no longer be evoked in the daily use of the space.

Figure 6. Tobacco Factory Samsun 2024

The results obtained through cross-examination of the survey conducted within the research framework indicate that as age and length of residence decrease, users' historical knowledge of the former factory site diminishes. Notably, 62% of young customers aged 18-25, who have lived in Samsun for more than 10 years, do not believe that the former tobacco factory is a significant part of Samsun's history. This also came through interviews:

'I am happy with this surrounding I like shopping here for me that's the only importance' (interviewee_age 26).

This contrasts with the majority of other age groups, who consider the building to be an important historical structure. However, among these the students of various education phase also highlighted it was due to their lecturers that they know this place one was a facotury and they were very surprised about to learn that. The findings suggest a linear relationship between age and the perception of the tobacco factory as a historical building: as age increases, so does the recognition of the building's historical significance. Supporting that, imaginary wishes of the interviewees indicated this importance:

'Would like to have the 'as if' museum like experience, imagine like a small museum with models representing the production, or is they still keep the machinery, when entered we could even smell the tobacco, that would be great!' (interviewee_age 30)

		Bulvar Shopping Center Is An Important Historical Heritage (Yes-No)	
Age		**YES**	**NO**
18-25	124	75	49
26-44	122	72	50
44-59	80	52	28
60+	65	51	14
Family Residency in Samsun (%)			
Yes	72.6	185	205
No	27.4	63	96
How Many Years Have You Been Residing in Samsun			
Less Than 1 Year	13	8	5
1-5 Years	69	42	27
6-10 Years	38	26	38
10+ Years	234	155	79
Not Residing (Visitor)	38	18	20

Table 2. Whether the Bulvar Shopping Centre's an important historical heritage or not and how the answers are crossed with descriptive questions.

Overall, the findings indicate that while 60% of interviewees consider the Bulvar Shopping Centre, formerly the Samsun Tobacco Factory, significant for the city's historical culture and heritage, 40% do not view it as an important heritage site (Table 2). The survey results and random interviews reveal that respondents aged 60 and above consistently identified the tobacco factory as a key cultural heritage, indicating that older age groups have a stronger connection to the site's heritage and memory, and therefore place greater importance on preserving the historical environment. In addition to the survey, interviews were conducted with selected individuals from professional groups who were decision-makers regarding the site. A key point that emerged from these interviews was the criticism of the additional structure proposed by the architectural firm during the transformation process, with a consensus that the decision not to implement it was correct. The interviews with key informants also highlighted concerns that the absence of any elements related to the factory's former production activities would prevent new users of the space from recognizing its historical past. It was noted that while the bureaucratic aspects of the process were handled gradually and the decision on the post-transformation function was appropriate, the loss of identity elements during the transformation was considered a significant mistake.

CONCLUSION

Field studies conducted during the transformation of the Samsun Tobacco Factory, presented as an example of the adaptive reuse of former industrial areas, reveal that no elements of the site's previous use were retained post-transformation, as evidenced by both interviews and survey results. While the meticulous preservation of the factory's original architecture contributed to a successful physical transformation, the erasure of all images related to the old factory from collective memory highlights the social erosion caused by the transformation. The younger population's lack of knowledge about the factory's history—or their failure to regard it as significant to the city's history even if they are

aware—indicates a fading cultural memory over time. The neoliberalized spatial configurations have effectively acted as a visual wash, shaping the perceptions of younger generations to the point where they are less informed about the tobacco factory's historical significance. This trend is particularly evident in the 18-25 age group, where only half acknowledge the tobacco factory as a historical heritage site.

Marc Augé's concept of the "Education of Gaze" suggests that the declining interest and knowledge of historical sites among the younger population leads to a diminishing awareness of cultural heritage and a growing disregard for social sustainability as important concepts. The transformation of the Samsun Tobacco Factory into a commercial shopping center, devoid of any traces of its cultural value or collective memory, exemplifies the creation of a non-place, as argued by Augé. Over time, the gazes of younger generations have been educated to overlook the site's historical significance, leading to a loss of connection to what was once Samsun’s most important industrial identity.

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A TASTE OF HOME: THE CULTURAL SIGNIFICANCE AND DESIGN OF HONG KONG-STYLE CAFÉS (*CHA CHAAN TENGS*) IN THE UK

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INTRODUCTION

The population of Hong Kong migrants in the United Kingdom (UK) has surged since the introduction of the British National [Overseas] (BN[O]) immigration route in 2021. As of 2024, demographic data indicate, a total of 279,712 migrants from Hong Kong live in the country, marking a 106.73% increase from 2021. This phenomenon attracted national attention through a special feature in *The Sunday Times Magazine* in early 2024, highlighting the popularity of the scheme.[1]

Large migrations change demographics, economies, societies and cultures by introducing old customs and traditions into new areas.[2] A well-known phenomenon that has spread from Hong Kong through migration is Hong Kong-style cafés, also known as *Cha Chaan Tengs* in Cantonese. They are known for their compact interiors, customised minimalist furniture and local, affordable food. Curious about why Hongkonger immigrants open and frequent Cha Chaan Tengs, we investigated this trend in British cities. This paper examines how the Cha Chaan Teng typology and design have been integrated into British cities. We studied these issues through place and participant observations conducted at Cha Chaan Tengs in Hong Kong and in the British cities of Nottingham, Manchester and London. We report on the similarities and differences between the designs of Cha Chaan Tengs in Hong Kong and the UK.

Demographics of Hong Kong migrants

Historically, Britain has been a popular destination for Hong Kong migrants due to the historical maritime trade, history of colonialism and effects of two World Wars.[3] These factors have contributed to a significant presence of Hongkongers in Britain. Figure 1 illustrates the demographic growth of Hong Kong migrants in the UK over the past three decades and highlights two different immigration tendencies representing old and new diasporic patterns.

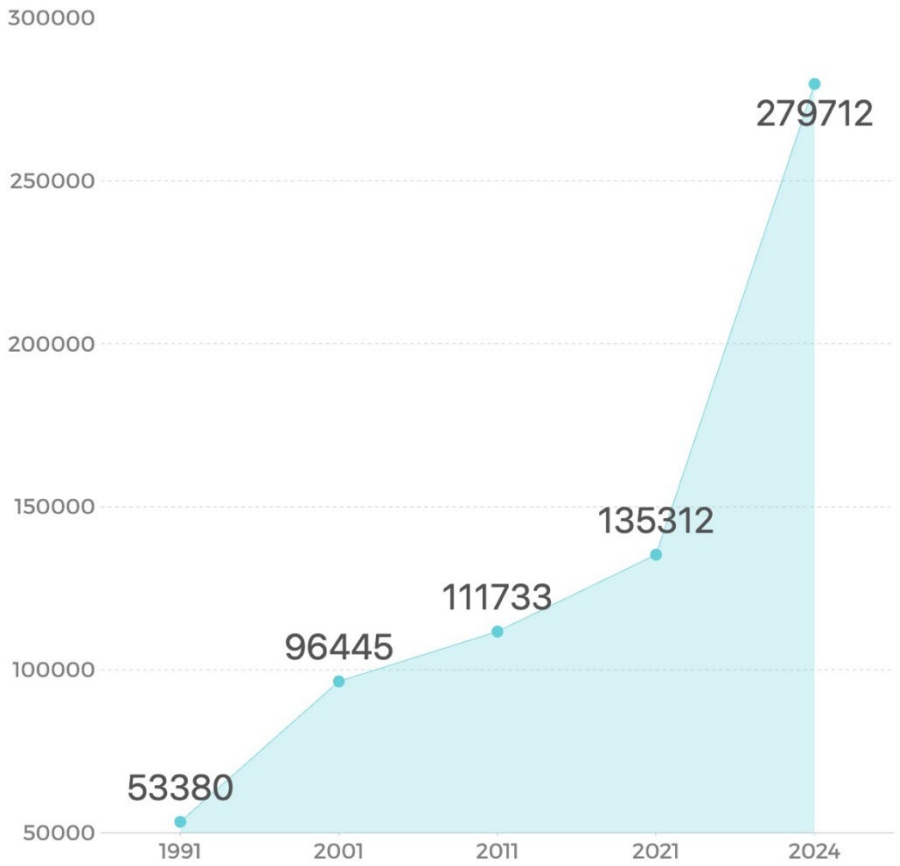

Figure 1. Demographic data on emigration from Hong Kong to the UK from 1991–2024. Data collected by the 2021 Census[4] (for 1991–2021) and the Home Office (for 2024).[5]

The old diasporic pattern includes the earlier port entry system, British colonial migration pathway, voucher system and chain immigration system. The new pattern is the BN[O] migration route, a bespoke humanitarian immigration system implemented in January 2021 that grants the right to live, work and study in the UK to eligible BN[O] passport holders.[6] The two immigration patterns have contributed to significant but different Hong Kong diasporas in the UK. As Figure 1 shows, the old pattern facilitated relatively slow migrant population growth, starting with 53,380 in 1991 and gradually increasing to 135,312 in 2021. However, the BN[O] pattern has led to a population explosion, with growth more than doubling from 2021 to 2024 compared to the past three decades.

Design transfer through migration

Heavy migration significantly impacts the urban fabric of destination countries. This phenomenon is caused by the "globalisation of capital, technology, labour and corporations and the accompanying mass-migrations and flows of people and information associated with the late phase of modernity."[7] Migrants bring new customs and traditions to their new locations[8] through tangible and intangible heritages associated with objects, places and practices. Through visual and material culture, diasporic community members bond with people, places and narrations of historical stories and traditions.[9]

Design plays a central role in this process of resettlement, as activities and artefacts are centred around the creation of a specific sense of place, referred to as a 'designscape.'[10] Differing fluencies in 'design literacy' – for example, in the selection and organisation of graphic elements such as typography, colour, symbols and languages – play an important role in facilitating the transnational

connections that expedite a sense of belonging and identity.[11] For migrant communities, food retail environments provide emotional connections that enable transnational linkages. For example, through outlets such as Cha Chaan Tengs, newly arrived Hongkongers transfer their design knowledge and practices, reshaping their adopted built environments.

What characterises a Cha Chaan Teng?

The Cha Chaan Teng is a café format that emerged in Hong Kong in the 1950s. It represents a fast-food locale that has gained popularity not only in Hong Kong but also elsewhere in Southeast Asia. Cha Chaan Tengs are known for their local 'East-meets-West' dishes along with affordable prices, customised minimalist furniture and compact interiors, as illustrated in the collage in Figure 2.

Figure 2. Collage representing a classic Hong Kong Cha Chaan Teng[12] (image from http://www.hkmemory.org/open-rice-city/hoion09_en.html)

We investigated this trend by examining several such establishments in the UK. We asked the following questions: Has the Cha Chaan Teng typology been integrated into British cities? How is the design managed? How is the café design changing in the migration context?

METHODS

Research approach

This study is part of a larger research project that explores the sense of belonging in cafés. Given the study's exploratory nature, a qualitative approach was adopted[13] to understand the rationales behind the store designs in each location and observe their impact on users. Our interests encompassed spatial

design, service design, food and communication. This led us to adopt a method that included both environmental observation studies[14] and participant observation studies, including casual conversations with Cha Chaan Teng staff and customers.[15] Additionally, desk research was conducted to gather information about the history and style of Cha Chaan Tengs and identify examples in the UK.[16] Thirteen cases in the UK and twelve in Hong Kong were selected, and observational studies were conducted between January and April 2024.

Geographic distribution of Hong Kong migrants in the UK

Several studies have investigated the geographic distribution of Hong Kong migrants, including a statistical analysis by the University of Liverpool[17] and a survey of 720 Hong Kong migrants conducted by the Public Affairs Section of Hongkongers in Britain.[18] Together, they characterise the six most popular British cities for new Hong Kong migrants: London, Reading, Manchester, Birmingham, Nottingham and Bristol. Due to the limitations of the research period, available funds and travel capacity, as well as the broad quantity and distribution of Cha Chaan Tengs, we focused on three cities for the field research: Nottingham, Manchester and London.

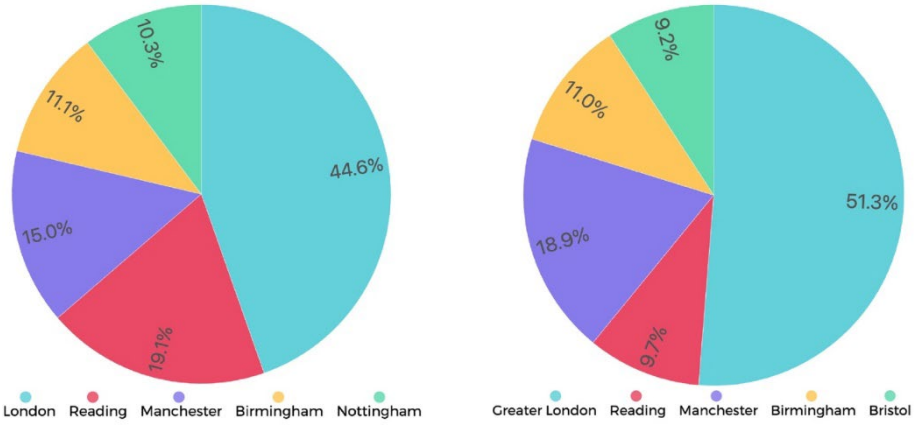

Figure 3. UK cities with the most Hong Kong migrants or preferred by Hong Kong migrants. Data collected by Yue[19] (left) and Hongkongers in Britain (right)[20]. Illustrations by the authors.

Data collection and analysis

Figure 4 illustrates the data collected in Hong Kong and the UK and the collection methods used.

Figure 4. Methods used and types of data collected

We analysed the features of the Cha Chaan Tengs using the experience design management framework,[21] which defines four categories – product, environment, service and communication – that are all relevant to the study. We identified design components within these four categories (Figure 5) and examined the similarities and differences between the components found in Hong Kong and those found in the UK.

Category	Research elements
Product	Food options, food variation, and price level
Environment	Interior, exterior, layout, and decoration
Service	Customer journey, staff and customer interaction, ordering and payment system
Communication	Languages used, marketing channels, and menu presentation

Figure 5. Applying the experience design management framework to Cha Chaan Tengs

FINDINGS

In this section, we describe and compare the characteristics of the Cha Chaan Tengs studied in the UK and Hong Kong. We organise the discussion according to the categories of products, environment, service and communication, although there is some overlap between these topics.

Products

In terms of products, we found that the meals offered in the UK were similar to those in Hong Kong, albeit with fewer options on the menu. Additionally, the UK Cha Chaan Tengs featured a greater focus on the visual presentation of food, while in Hong Kong, the presentation was mainly text based. Prices in the UK were slightly higher than in Hong Kong but remained lower than those of most UK competitors, ending up comparable to prices at a street market rather than a café or restaurant. Figure 6 shows product representations and descriptions found in Hong Kong (left) and the UK (right).

Figure 6. Images of products and menus from Cha Chaan Tengs in Hong Kong (left) and the UK (right).

Environment

The Cha Chaan Teng interiors observed in the UK were larger than those in Hong Kong. Apart from the Chinese writing, some Cha Chaan Tengs initially looked like traditional British-style cafés (see the two photos on the right of Figure 7). Furniture in the UK was also larger and more comfortable. Stylistically, we observed a mix of traditional British café furniture in the UK, featuring upholstered chairs that were larger and more comfortable than the wood or plastic stools and wooden benches in Hong Kong. To reproduce the authentic Cha Chaan Teng interior design style, some café owners had custom-made the classic Hong Kong-style benches (Figure 7, UK, top right and bottom). Although the design resembled those of the benches we saw in Hong Kong, they were significantly larger in the UK. Moreover, counter- and bar-height furniture was prevalent in the UK but not found in Hong Kong.

In the thirteen UK Cha Chaan Tengs studied, the staff and owners were all Hong Kong migrants. They opened their first Cha Chaan Tengs as a means of economic sustenance to survive in the UK. As a result, they often had less operational experience than owners in Hong Kong, who typically have many years of history behind them. This difference results in the café interiors often appearing newer in the UK. Additionally, we observed that customers in the UK are predominantly younger and from multiethnic backgrounds. In contrast, Cha Chaan Tengs in Hong Kong typically attract families or a slightly older, mainly local Hongkonger audience.

Figure 7. Left: Cha Chaan Teng styles in Hong Hong as interpreted by Hong Kong Memory.[22] Right: Photos taken by the authors of product presentation and menus at Cha Chaan Tengs in the UK

Service

In terms of service, we focused on the customer journey. While Cha Chaan Tengs in Hong Kong primarily serve as local neighbourhood hubs frequented by locals, those in the UK often function as 'destinations' rather than regular hubs. Many Hongkongers we spoke with often travelled long distances to visit specific Cha Chaan Tengs in the UK, which they discovered mainly through social media and word-of-mouth rather than daily walks in the neighbourhood.

The services offered by Cha Chaan Tengs in the UK vary according to the urban hierarchy of capital and regional cities.[23] In the capital city of London, Cha Chaan Tengs have ordering and payment systems that involve less social interaction than those in regional cities, such as Nottingham and Manchester, as well as those in Hong Kong. Cha Chaan Tengs in London often offer digital ordering

and payment systems at the entrance. In contrast, in Nottingham, Manchester and Hong Kong, more conventional systems are used, with table ordering and payment services. In Cha Chaan Tengs outside London, service involves more social interaction between customers and staff. Customers order food through verbal communication with the staff, and the meals are then prepared and served at the table. The staff identify the order via a number sign that the customer takes after paying or by calling out the customer's name at a counter (Figure 8). The digital service featured in London's Cha Chaan Tengs results in far fewer human touch points than observed in other cities, where Cha Chaan Tengs are known as neighbourhood hubs with frequent interactions between customers and staff.

In Hong Kong, the menus are typically printed on a card placed under a glass plate on the table. While this practice is largely obsolete in stores in London due to the introduction of digital ordering systems, some stores still have such menus. However, they seem to serve more as a decorative element to evoke Hong Kong-style authenticity than as a practical tool for placing orders (Figure 8, bottom, right).

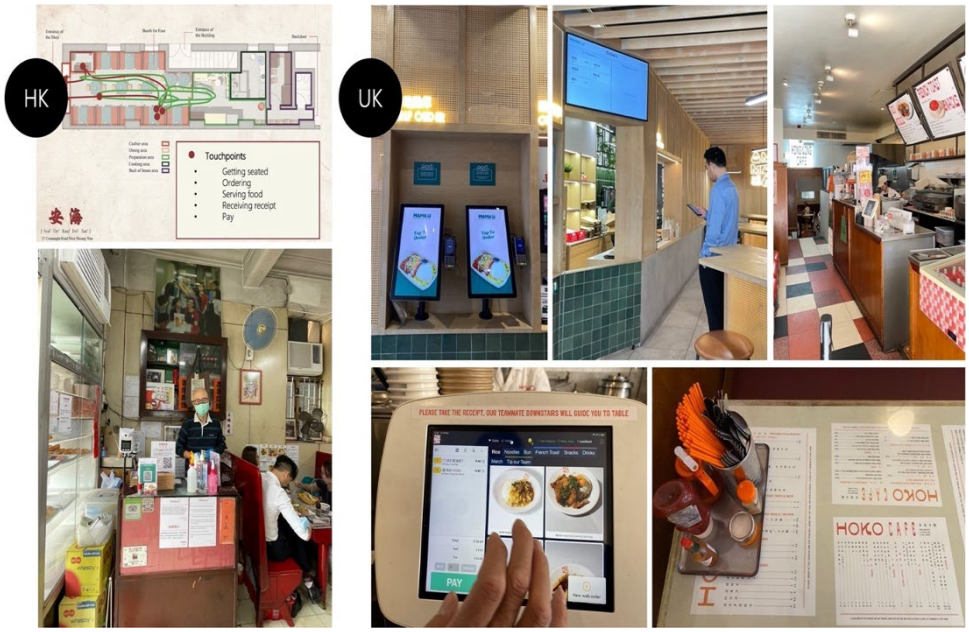

Figure 8. Left top: The map of the customer journey, created by the authors, is based on a layout by Hong Kong Memory.[24] Left bottom: The conventional service system in Hong Kong. Right: The digital service system in London. Lower right corner: Menu placed on a table for decorative element only in the UK rather than for service use.

Communication

Our analysis of communication considered digital tools, languages, product presentation, migration and political communication. Regarding digital communication, we observed that nearly all UK Cha Chaan Tengs maintained a presence on digital platforms, such as Instagram, Facebook and various websites, to introduce their products and services. These platforms were mainly bilingual (English and traditional Chinese).

Product presentation also differed between the UK and Hong Kong. In Hong Kong, menus and product promotions were often displayed in the form of posters on the facades and walls. These presentations often featured handwritten or printed text. These materials were typically provided by the Cha Chaan Tengs' suppliers for advertising and to display menus (see Figure 9, bottom left). In contrast, UK stores often used customised presentation designs with carefully arranged photos of

dishes and descriptions, either on signs or digital platforms, to provide an aesthetic ordering experience.

In terms of context communication, Cha Chaan Tengs serve not only as part of the food economy, providing a means of livelihood for migrants, but also as avenues for cultural transmission and heritage exchange. Through these venues, migrants introduce their food, dining culture and catering history to the local population. These venues in the UK also function as communication hubs, allowing migrants to share their pre-immigration culture with those outside their cultural community and enrich the diversity of food culture in the UK. In casual conversations with store owners, they mentioned that one of the reasons for opening a Cha Chaan Teng in the UK was to introduce Hong Kong food culture to the British populace. Additionally, some Cha Chaan Tengs in the UK serve as hubs for political expression. The users represent their political stances with interior design elements such as colours, signs and posters. Verbal communication also plays a role, with some establishments playing songs by anti-government singers that have been banned in Hong Kong. These political communications thus distinguish Cha Chaan Tengs in the UK from those in Hong Kong, where such expressions are illegal.

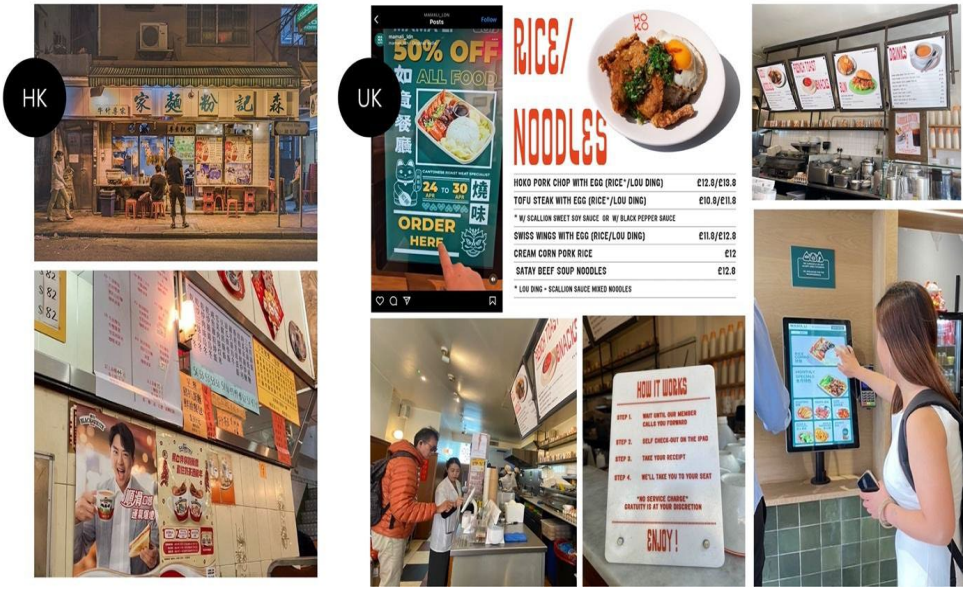

Figure 9. Left: Product presentation in Hong Kong. Right: Product presentation in the UK.

CONCLUSION

Hong Kong migrants have brought the Cha Chaan Teng café format and traditions to life in the UK. Typically, UK Cha Chaan Tengs are owned and operated by Hong Kong migrants, communicate bilingually in English and Chinese and serve meals similar to those offered at Cha Chaan Tengs in Hong Kong. However, the UK versions have fewer meal options, slightly higher prices, greater attention to visual product presentation and professional design identities customised for each individual store. They occupy larger spaces than those in Hong Kong and often share design features with traditional British cafés, sporting larger and more comfortable furniture than the Hong Kong stores.

The use of digital screens for ordering and payment creates different customer journeys, with far fewer touchpoints between staff and customers in the UK than in Hong Kong. Digital solutions are more widespread in the UK, including communication between cafés and customers on digital

platforms. Overall, the UK's Cha Chaan Tengs differ from their Hong Kong predecessors in their use of technical solutions, detailed and appealing product descriptions and presentations, and relatively limited food choices. While this may enhance operational efficiency in UK stores, there is a risk that such efficiency could come at the expense of the community spirit found in the local hubs of Hong Kong.

Cha Chaan Tengs in the UK have modernised a classic and slightly old-fashioned café style through digitalisation and design professionalisation. They have implemented digital ordering systems, which reduce the need for staff; appear to use professional designers and photographers; and use bilingual text to overcome language barriers. These innovations have successfully attracted customers with diverse cultural backgrounds, who travel long distances to visit the cafés. Additionally, these places introduce Cha Chaan Teng food and culture to the British while sometimes also using the shops as mediums for expressing political stances and uniting Hong Kong migrants who share the same political views. This can inform local customers of the political situation in Hong Kong and remind their peers of previous movements in Hong Kong. Further research is needed to understand the multifunctional role of Cha Chaan Tengs in the migration context and reveal the symbolic and semiotic meanings of such places in enhancing migrants' sense of belonging, uniting minority communities, preserving migration heritages and facilitating positive acculturation. These questions will be addressed in subsequent studies through an integrated analysis of interview and place observation data to achieve a holistic ethnographic understanding of the roles Cha Chaan Tengs play in the migration context.

ACKNOWLEDGEMENTS

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DISTRIBUTION CHARACTERISTICS OF EXISTING CONDOMINIUMS IN THE TOKYO METROPOLITAN AREA

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INTRODUCTION

Many large, central cities across the globe have begun to shift from a pattern of development driven by dynamic changes at the periphery to a pattern driven by dynamism at the center. Rosen and Walks discussed the "condo-ism" of North American cities and stated that condo-ism should be essential in the contemporary city's private-sector production and reproduction. The condo-ism concept encompasses the following aspects:[1]

1) Urban densification and gentrification: Condo-ism often increases urban density and gentrification. It involves the construction of high-rise condominiums in central urban areas, which can attract middle- and upper-class residents, thereby altering the social and economic fabric of neighborhoods.

2) Private urban governance: Condominiums represent a form of private urban governance, meaning that private entities, rather than public authorities, manage and maintain these residential buildings. This shift can impact the distribution of resources and services within the city.

3) Social and cultural transformation: The development of condominiums can lead to significant social and cultural changes. It often results in the displacement of lower-income residents and the introduction of new social norms and lifestyles associated with urban living.

4) Economic implications: Condo-ism is closely linked to the financial and construction sectors. The development of condominiums is driven by market forces and investment opportunities, which can lead to speculative real estate practices and fluctuations in property values.

Webb and Webber state that condominium neighborhoods are increasingly being built in city centers as a response to market and demographic preferences related to homeownership. The reason of condominium development also strengthens the links between condo-ism, neoliberalism, and the production and redistribution of public goods.[2] As Workineh mentions, Ethiopia's African city of Gondar City is also experiencing typical population growth.[3]

Moreover, condominium housing is affordable and popular among residents. Rosen also stated that socio-spatial inequalities in condominium developments might increase due to the uneven distribution of funds allocated to the already fastest-growing areas of the city that appeal to condominium developers.[4]

Japan is experiencing a similar situation in terms of condo-ism because it is also experiencing condo-ism in cities. Japan's census results from 2000 to 2020 reveal an increase in the proportion of households residing in cumulative housing across Japan. Moreover, apartment complexes are

becoming the predominant form of housing in urban areas.[5] In 2020, the aggregate of the types of housing construction nationwide (general households living in homes) was 54,953,523. Of these, 29,561,373 (53.8%) denote detached homes, and 24,493,087 (44.6%) represent cumulative housing types. The latter percentage has increased consistently since 2000; detached homes have grown by 2.9%, and cumulative housing types have increased by 11.1% between 2020 and 2000, indicating an increase in the proportion of households in cumulative housing. The proportion of apartments is high among general households residing in their own homes in large cities: for instance, it is 41.4% in Tokyo, 32.6% in Kanagawa, and 28.5% in Osaka.

The proportion of condominiums as a form of housing is rising in densely inhabited districts, thus resulting in a growth in the proportion of households inhabiting condominiums.[6] In 2020, the percentage of households living in shared housing was 70.3% in large cities such as Tokyo. Thus, optimizing the location and maintaining the existing condominiums would significantly impact urban structure and influence the configuration of local communities.

Yamagami proposed a mathematical model (i.e., the expanded Clark model) to explain changes in population density distribution in metropolitan areas (i.e., expansion of urban areas and suburbanization).[7] This suggestive model explained the structure of cities engaged in population growth but not the relationship between condominiums and train stations.

Terai assumed a concentric urban structure to elucidate the characteristics of condominium locations and prices based on an analysis of newly built condominiums in the Tokyo metropolitan area (within a 70-km radius of the former Tokyo Metropolitan Government Building).[8] However, Terai's analysis recorded the distance from the city center in 10-km increments, resulting in the lack of accurate understanding and analysis of the distance between the city center and each train station.

Furthermore, Ota and Kawasaki provided insight into the actual state of vacant rental housing based on the construction year and location of the residences.[9] They measured the location in distance ranges within the metropolitan area (0–70 km in 10-km increments). However, they did not show the distance between the city center and the vacant housing, and they measured the distance between the nearest train station and the vacant housing in five stages, ranging from less than 200 m to more than 2,000 m. Consequently, they could not accurately measure and analyze the distance between each housing unit and the nearest train station.

Diewert and Shimizu presented a hedonic regression model for analyzing the sales of condominium units in Tokyo from 2000 to 2015 and estimated the annual geometric structure depreciation rate for condominiums in Tokyo.[10] The following characteristics are important for explaining condominium prices: floor space area of the unit, total land area of the building, number of units in the building, number of stories in the building, height of the sold unit, age of the structure, and the amount of excess land. However, they ignored the relationship between the transportation hub and the location of condominiums.

Shen investigated the disadvantages of housing in terms of location and accessibility using GIS. This study suggests the adoption of GIS and provides findings on the distribution of housing; however, the study only focuses on manufactured housing, which does not include condominiums.[11]

Tang discussed the proximity of condominiums to railway stations or transportation hubs in Kyoto city's central district.[12] However, this study does not statistically show exact numerical distance values.

Therefore, this study references the results of previous research to clarify the distribution characteristics of existing condominiums traded on the market in the Tokyo metropolitan area from the perspective of their distances from transportation hubs (i.e., railway stations). Thus, this study improves measurement accuracy by using coordinate values on a GIS to calculate the following.

1) The distance of existing condominiums from the center of the Tokyo metropolitan area

2) The distance of existing condominiums from the nearest station

MATERIAL AND METHODOLOGY

Research Subjects

The Tokyo metropolitan area, which comprises cities, wards, towns, and villages, and includes existing urban areas and suburban development zones under the law,[13] was adopted as the target study area because it encompasses the most significant number of condominiums in Japan and holds the most substantial number of units and distribution values. Metropolitan areas were targeted because the activity areas of condominium residents are not limited to a single local administrative district (metropolitan or prefectural), and it was deemed appropriate to grasp this expanse in terms of metropolitan areas. In addition, as previously mentioned, this study targeted existing condominiums, which were considered to exert an influence because they command a larger share in the real estate market than new constructions.[14] The number of newly built condominium houses supplied (35,772 units) in 2016 in metropolitan areas (Tokyo, Ibaraki, Tochigi, Gunma, Saitama, Chiba, Kanagawa, and Yamanashi) was higher than the number of existing condominium houses sold (37,189 units). This trend has since continued, and according to a survey by the Tokyo Kantei Market Research Department, the number of newly built condominium houses supplied in 2022 (38,020 units) will be higher than the number of existing condominium houses in circulation (180,658 units), and the market share of existing condominium houses will reach 82.6%.

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Data collection method

A sample of existing condominiums assumed to have been traded within the Tokyo metropolitan area was obtained by applying the following conditions to achieve the research objectives.[15]

1) Existing condominiums registered in the Tokyo metropolitan area that were traded during the one month from April 1 to May 1, 2023[16] were selected (as of May 1, 2023, the number of registered units was 1,512,858 units or 72,003 buildings)[17]

2) The sample was sized 500 or more and was randomly selected

3) The selected sample included latitude and longitude location information

The author also used the GIS[18] spatial calculation tool (intersection)[19] to confirm that the extracted sample was located within the Tokyo metropolitan area and obtained a sample size of 509.

Grasping the distribution characteristics of existing condominiums

Finding the distance from the center of the Tokyo metropolitan area

The locations of railway stations in the Tokyo metropolitan area and the number of passengers were identified to clarify the associations between existing condominiums and transportation hubs (railway stations).

GIS was utilized to identify the location of the weighted average coordinates (railway station centroid) based on the number of passengers at the railway station.[20] As a result, it was discovered that the location of the railway station centroid corresponded to the southwest corner of Yoyogi Park Soccer, Hockey, and Rugby Field at 2-3 Jinnan in Shibuya-ku. The center of the Tokyo metropolitan area was set in this study as the railway station centroid from the perspective of prioritizing railway use, and the distance from the railway station centroid to each station was measured to obtain K1 (km).[21] The author used station-specific passenger count data.[22] These data included the location information and number of passengers boarding and alighting by station in 2020 (people/day). This study is distinctive because it measured the straight-line distance between the railway station centroid and each Tokyo station.

In this study, the author adopted a “monocentric model” that evaluated the distance from the center of the metropolitan area by the distance from a single center of gravity (K1) obtained from the number of passengers boarding and alighting at the train station. However, setting multiple starting points of K1 according to the number of passengers boarding and alighting or the metropolitan area’s definition and analyzing the data using a “multicenter model” is possible (e.g., with Tokyo and Yokohama as two poles). However, the author did not adopt the multicenter model for the following reasons. First, combining the center of gravity of multiple points into one point is reasonable even if there are multiple poles because the weighting is accomplished by the number of passengers boarding and alighting at the station. Second, the station center of gravity, weighted by the number of passengers boarding and alighting at the station, was located near Shinjuku Station, which is generally considered the center of the Tokyo metropolitan area.

Thus, it did not make sense to consider this one point as the center of railway use for the entire Tokyo metropolitan area. Third, the railway station’s center of gravity obtained by considering the weighting by the number of passengers boarding and alighting at the station does not imply that this point is identified as the only destination station standard for all railway users. Moreover, regarding the explanatory power of the “unipolar concentration model,” the author considered that a unipolar concentration model was adopted in previous studies.[23]

Understanding the distance from the nearest station

The sample of existing condominiums was positioned on a map based on their location information, and the straight-line distance to the nearest station was measured to yield K2 (km). This study measured the straight-line distance between existing condominium buildings and the nearest stations. The “segregation threshold” shown in the “residential location” model based on the bid rent theory denotes the relationship between the distance from the CBD (the central business district) and the bid rent. This study presents the segregation threshold on two axes, including the distance from the nearest station and the CBD. The distance to the nearest station is often measured in terms of time based on the actual walking distance. However, this study used the straight-line distance to the station to designate the distance to the nearest station for the following reasons:

1) It is more precise and accurate to measure the proximity to the nearest station by the time taken to cover the distance based on the shortest route. However, actual routes include factors such as the condition of sidewalks, road crossings, and differences in ground elevation. Limitations are presented when accounting for such factors while calculating distances based on the time expended on the shortest route.

2) No problems related to the study’s objectives or accuracy would accrue by the author's substitution of the straight-line distance to the nearest station to effect comparisons.

Introduction of the distance index value

The distance index value was defined as D (km^2) = K1 (km) × K2 (km), and the relationship between the D value and the distribution of existing condominiums was apprehended. The D value was chosen as the product rather than the sum of K1 and K2 because the magnitudes of the values for K1 and K2 can differ by two digits, and using the D value as the product made it easier to recognize each distance's effect intuitively.

Expressing the distance index value as a sum would incur the risk of underestimating the effect of K2 in areas where the difference between K1 and K2 was significant. For example, if K1 was 20 km and K2 was 1 km, the D value would be 21, and the K value would be $1/21 = 0.047 < 0.05$, a fraction generally adjudged within the margin of error. Hence, in this study, the distance index value was expressed as the product of K1 and K2 to avoid this issue. For example, the same D value of 5.6 km^2

is calculated for a condominium building with K1 (7 km) × K2 (0.8 km) and a condominium building with K1 (28 km) × K2 (0.2 km). This indicates that even condominiums farther from the nearest station can be valued highly in the market in areas with small K1 values (closer to the center of gravity of train stations) compared with those in areas with large K1 values (farther from the center of gravity of train stations).
Notably, the D value does not indicate an area with identical buying and selling prices because each condominium building is bought and sold reasonably in the market.

RESULTS AND DISCUSSION

Locations of existing condominiums and distances from train stations

Distance from the center of gravity of the railway station to the railway stations nearest to existing condominiums

Figure 1 presents the distribution of existing condominiums and train stations in the Tokyo metropolitan area. Notably, existing condominiums are densely concentrated around the center of gravity of train stations and extend outward along the railway lines. Moreover, the sample of existing condominiums is observed to become sparser further away from the center of gravity of the railway stations.

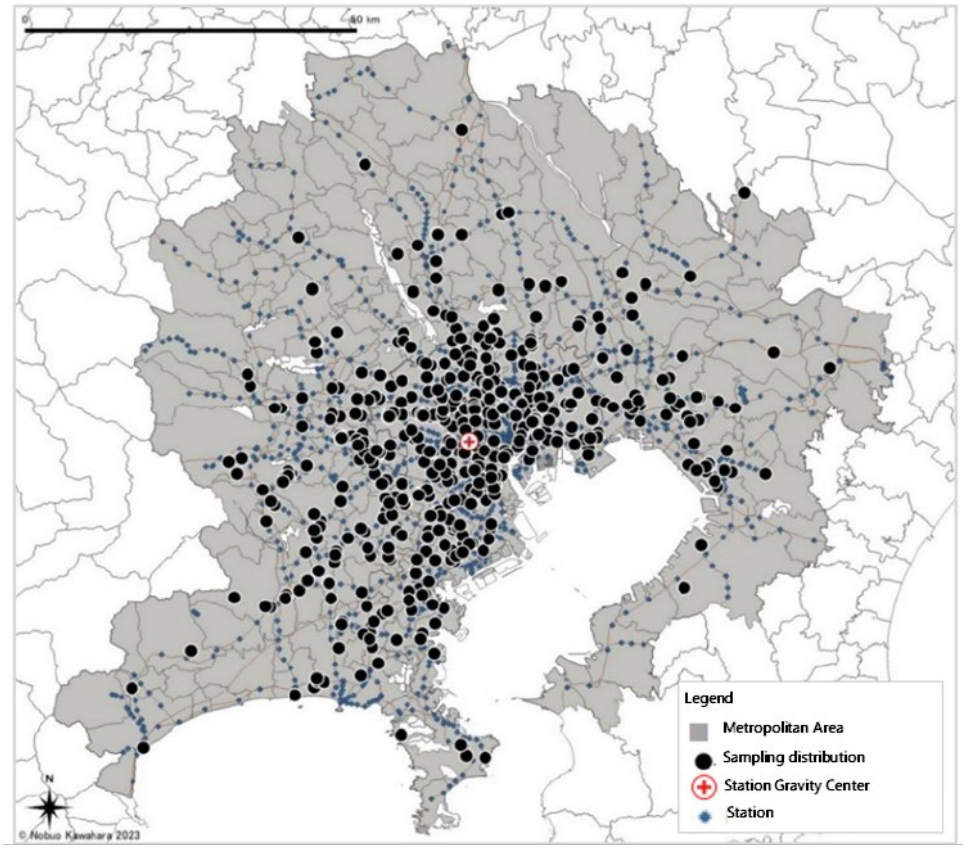

Figure 1. Distribution of existing condominiums and train stations in the Tokyo metropolitan area

Figure 2 reveals the distribution of the distance K1 (km) from the center of gravity of the railway station to the stations nearest to the existing condominiums in a histogram and box plot. Accordingly, the range is average: 18 km, median: 15 km, minimum: 1 km, and maximum: 70 km. However, this approximation formula does not express a decrease in existing condominiums near the center of gravity of train stations (1–6 km). Therefore, this approximation formula reveals only the tendency for

the number of condominiums for sale to become sparser further away from the center of gravity of train stations in urban areas beyond 6 km from the center of gravity of train stations.

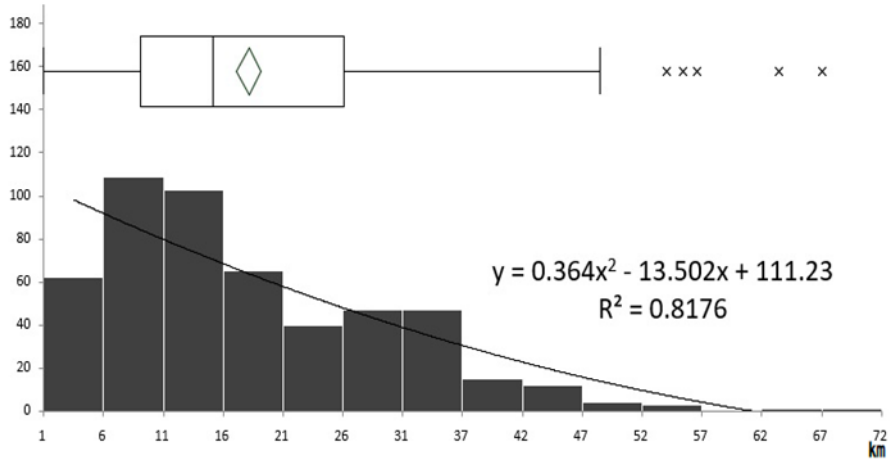

*Figure 2. Distribution of K1 (*km^2*)*

Distance from the existing condominiums to the nearest station

Figure 3 illustrates the straight-line distance K2 (km) distribution from the existing condominiums to the nearest stations in a histogram and box plot. The range is average: 0.58 km, median: 0.47 km, minimum: 0.038 km, and maximum: 5.2 km. The third quartile of the box plot is 0.73 km, revealing that 75% of the sample of condominiums is distributed within 730 m of the nearest station.

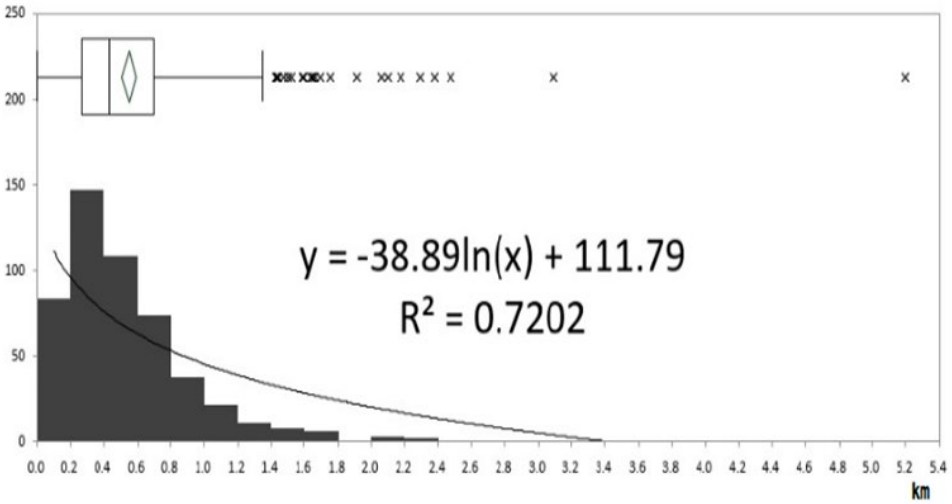

*Figure 3. Distribution of K2 (*km^2*)*

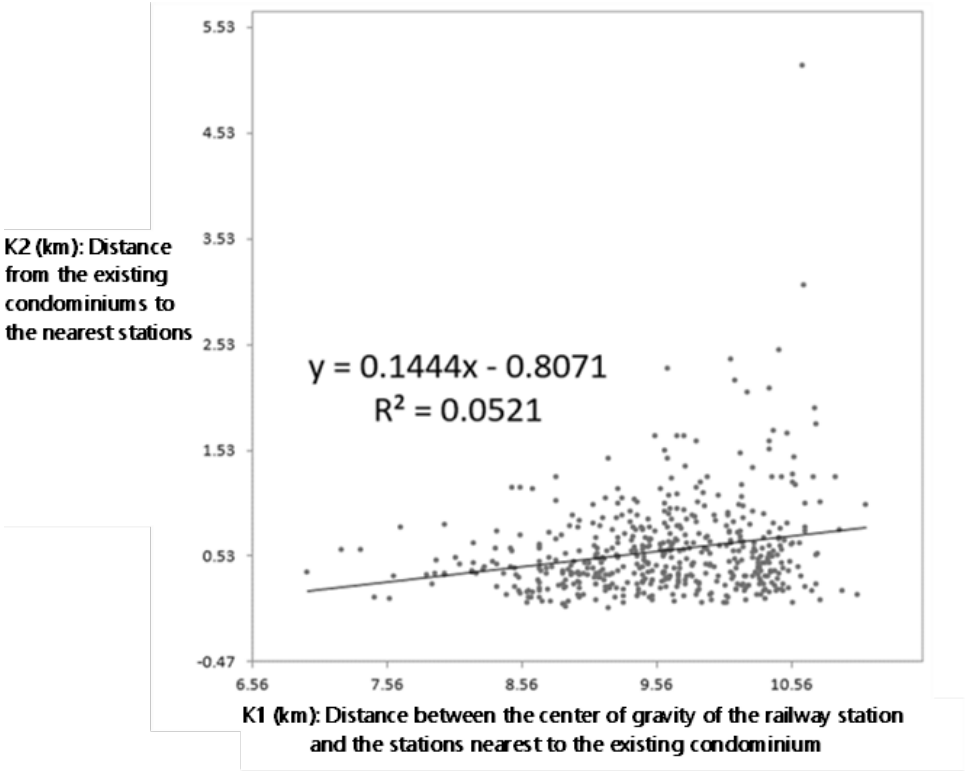

Figure 4. Correlations between K1 (natural logarithm) and K2

Using a natural logarithmic equation, an approximate curve was obtained to explain the tendency of the histogram in Figure 3, revealing that the distribution of existing condominiums is 0 in areas more than 3.4 km from the nearest train station. However, in reality, outliers exceed the third quartile +1.5 × interquartile range, thus proving that rare condominiums are marketable notwithstanding the distance from the train station. The author can infer that these condominiums attain marketability due to other factors. Notably, the approximation excludes such rare condominiums.

Furthermore, this approximation does not express that the number of existing condominiums is low near the nearest train station (0–0.2 km).

Hence, while using this approximation formula, it is noteworthy that condominiums bought and sold on the market tend to become sparser more than 2 km from their nearest train stations, excluding areas within a 0.2 km radius.

Further, the author's examination of the correlation between K1 (natural logarithm converted value) and K2 confirmed that the greater the distance from the nearest station, the further the station is located from the train station centroid, and a weak correlation was observed (correlation coefficient: 0.2282; Figure 4).[24]

Distance index values and distribution of existing condominiums

Figure 5 presents the distribution of the distance index value D (an index combining the distance from the railway center of gravity and the distance from the nearest station) via a histogram and box plot. As Figures 2 and 3 reveal, outliers existed in the sample. Therefore, an outlier test[25] was conducted, and 27 samples were excluded. Consequently, 482 samples were obtained (Mean: 887 (ha), median: 683 (ha), minimum: 23 (ha), maximum: 3,549 (ha)). The box plot in Figure 5 illustrates that 75% of the existing condominiums are distributed within the area of the third quartile of 1,256 (ha).

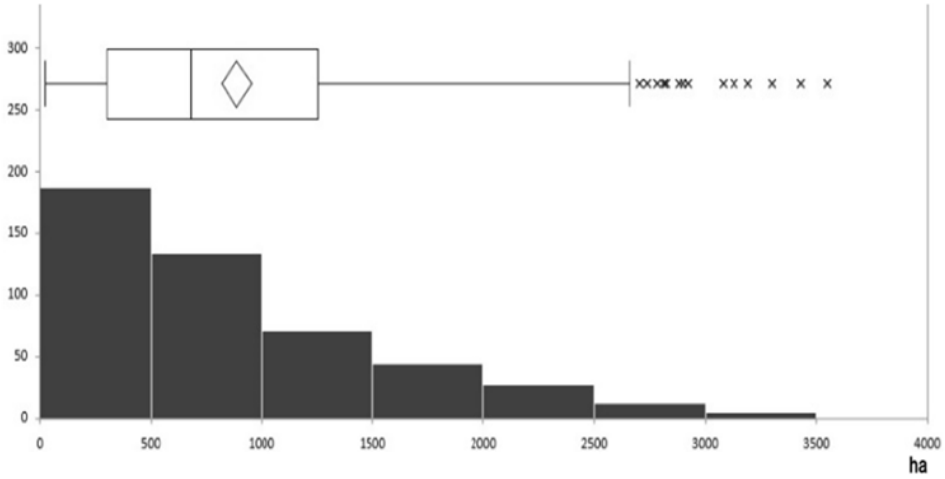

Figure 5. Distribution of distance index values (D) (excluding outliers)

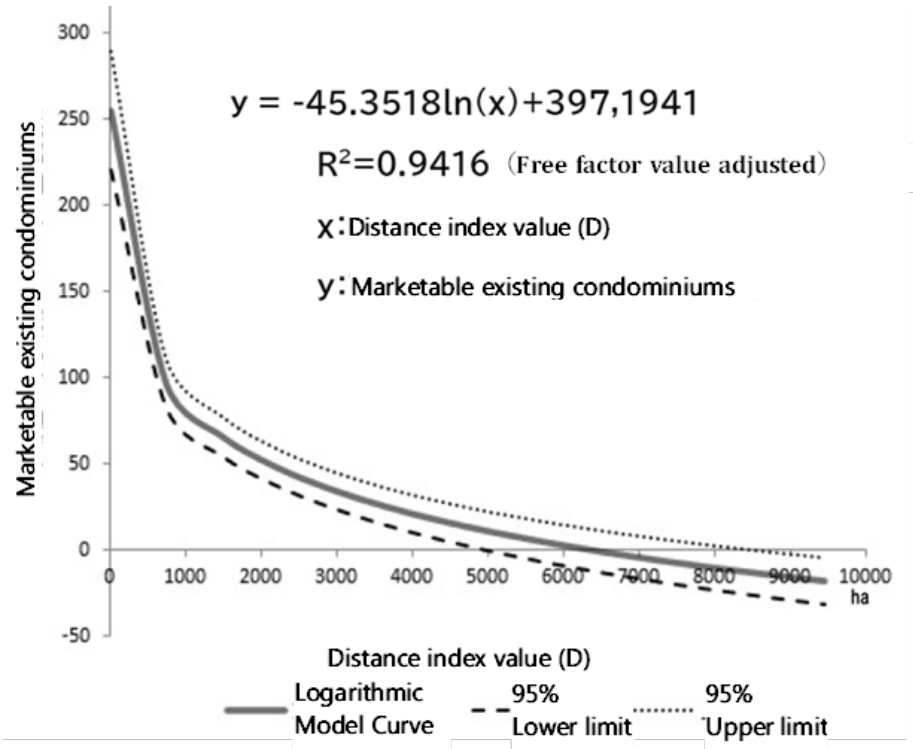

Figure 6. Prediction model of existing condominium locations that can be evaluated in the market based on distance index value (D) (natural logarithm curve)

Distance index value of existing condominiums that can be valued in the market

The author used the distribution of the distance index value D (without excluding outliers) to derive the conditions for existing condominiums that can be valued in the market. Figure 6 depicts that the author obtained a model equation using a natural logarithm curve. A test was performed for no correlation of the parent correlation coefficient (alternative hypothesis: no correlation between the parameters of K1 and K2 values). Thus, the upper and lower limits of the parent correlation coefficient by interval test were 0.3090 and 0.1442, respectively, and the p-value was < 0.001, which is significant because the p-value is less than 0.01. The alternative hypothesis was rejected, and the existence of a parent correlation was determined. According to this illustration, the location frequency

of existing condominiums is 0 in places where the D value exceeds 6,000 (ha) = 60 (km^2), thus confirming that this outcome matches the approximation equation in Figure 2.
The area below the line shown in the model formula will likely include existing condominiums valued in the market. In other words, the smaller the D value, the higher the marketability. However, the existing condominiums are assumed to be distributed above the line displayed in the model formula, indicating that these existing condominiums are difficult to value in the market.
For example, cases of existing condominiums being sold are unlikely to appear when the K1 value is 26 km or placed in the third quartile in areas where the K2 value exceeds approximately 2.3 km.
As previously mentioned, the model formula includes the tendency that the further away a station is from the train station's center point, the greater the distance will be from the nearest station. Therefore, this tendency is shown as a gently extending line rather than a straight line, although the frequency of marketable condominiums tends to decrease as the D value increases.
The frequency of existing marketable condominiums falls below 90 at a D value of 45.4 ha (0.454 km^2)[26], and the slope of the tangent to the model equation becomes steeper about the x-axis. Moreover, the slope of the tangent to the model equation becomes steeper relative to the x-axis in areas where the D value is smaller than 0.454 km^2.
Therefore, market evaluation can be inferred to change significantly around this point. For example, an existing multistory housing complex located 1 km and 45.4 km from the center of gravity of a railway station will be highly valued in the market if the straight-line distance to the nearest station is within 0.454 km and 0.01 km, respectively.
The model equation is based on a sample obtained through random sampling, and showing the probability distribution is imperative. Therefore, Figure 6 exhibits the upper and lower limits of the 95% confidence interval. The D value becomes more extensive, and the 95% confidence interval is wider the closer the D value becomes 0. Notably, a significant variation exists in the values calculated for each region.

Measures based on the distribution characteristics of existing condominiums

As described above, this study clarified the areas in which condominiums bought and sold on the market are located by their distance from the train station centroid (K1 value), their distance from the nearest station (K2 value), and the product of these two values as the distance index value D. This method made it relatively easy to verify areas in which existing condominiums would be highly valued in the market. Conversely, the technique also enables the identification of marginal areas where existing condominiums are unlikely to be valued in the market.
The study's premise to distinguish areas in which condominiums have been built in the past from areas in which existing condominiums can now be bought and sold is based on the following arguments:
1) The conditions stipulated for condominiums by buyers are becoming stricter when comparing the past and present Supply of condominiums against the backdrop of Japan's declining birthrate, aging population, and population decline.
2) Hence, condominiums whose value is recognized in the market and those whose value is not recognized in the market will both exist. Multistoried cumulative housing that is not valued in the market will become vacant. Alternatively, the owners of unvalued residences will become unknown. Consequently, such unvalued condominium buildings will become poorly managed.
3) Conversely, the value of real estate is determined primarily by its location.
4) Therefore, a difference exists between areas in which condominiums have been built in the past and areas in which existing condominiums are now being bought and sold.

CONCLUSION

This study clarified the characteristics of the distribution of existing condominiums traded on the real estate market in the Tokyo metropolitan area vis-à-vis their distances to train stations. Furthermore, the study's findings were employed to present important issues and ideas related to measures to address such issues from the perspective of maintaining the sustainability of existing condominiums at risk of no longer being valued in the market.

The study aimed to examine the sustainability of existing condominiums with greater accuracy. However, the author has identified several aspects requiring improvement and acknowledges and outlines certain methodology-related limitations. Future investigations by the author will overcome these difficulties, collect more detailed and multifaceted data, conduct analyses, and improve accuracy. Further measures to ensure the sustainability of existing condominiums must be elucidated, considering prospective changes in urban transportation systems.

First, railway lines capture the framework of urban configurations, but future studies by the author will also consider the perspectives of measuring the center of gravity of railways based on the purpose of railway use (commuting, going to school) as well as road and bus networks as a means of public transportation.

Second, the author intends to build an explanatory model for the location of condominiums that also includes micro-level explanatory powers, specifically in areas near stations. For example, this model will exceed condominium locations and elucidate the tendency of the concentration of urban functions, such as commercial facilities near stations, to further improve the accuracy of the study's clarifications.

Third, future studies by the author will more accurately illuminate the market valuation of existing condominiums. Specifically, data will be collected on existing condominiums that have been sold and those that remain unsold. Moreover, survival analysis will be performed using the data about the registration and registration cancellation dates. This analysis will further include a comparison of population and population density calculated from the number of people living in condominiums.

ACKNOWLEDGMENTS

A research grant from the Yokohama Academic Education Promotion Foundation supported this study. The author expresses immense gratitude to everyone involved.

NOTES

[1] Gillad Rosen, Alan Walks. “Rising Cities: Condominium Development and the Private Transformation of the Metropolis,” Geoforum 49 (2013): 160–72.
[2] Brian Webb and Steven Webber, “The Implications of Condominium Neighbourhoods for Long-term Urban Revitalization,” Cities 61 (2017): 48–57.
[3] Bantayehu Ayalew Workineh, “The Practice and Roles of Condominium Housing for Tackling Urban Problems in the Case of Gondar City, Ethiopia.” Heliyon 8 (2022): e11957.
[4] Gillad Rosen, “Condo-ism and Urban Renewal: Insights from Toronto and Jerusalem.” In *Private Communities and Urban Governance*, ed. A. Lehavi. Switzerland: Springer International Publishing Switzerland, 2016.
[5] Census by Japanese Government, in 2000 and 2020, https://www.e-stat.go.jp/stat-search/database, accessed by Dec 4, 2024.
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[8] Masato Terai, “Study on the Supply and Maintenance of Condominiums for Sale in the Stock Era.” PhD diss., Yokohama National University, Kanagawa, 1999.
[9] Hideya Ota and Kazuyasu Kawasaki, “The Actual Situation of Vacant Rental Housing: Focusing on Understanding the Actual Situation Based on Year Built and Location.” Reitaku University Bulletin 102 (2019).
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[12] Peng Tang, “Supply of Condominiums in Central District of Okayama City and Kyoto City.” Frontiers of Architectural Research 1 (2012): 178–85.
[13] The Capital Region Development Act, https://laws.e-gov.go.jp/law/331AC0000000083, accessed by Dec 4, 2024.
[14] The Real Estate Research Institute of the National Federation of Real Estate Transaction Associations “Real Estate Market Trends Data Collection Annual Report 2021” 16-16, ,2022.
[15] The Multi-storey Apartment House Research Co. Ltd.
[16] The completion of a transaction was determined by the “deletion of registration.” The basic information on the registration period from registration in the database to deletion is noted as follows: Average: 63.78 days, Median: 41 days, Minimum: 0 days, Maximum: 363 days (however, a transaction cannot be determined as completed even if a property has been registered for 363 days).
[17] To achieve research objective 2 (to show the location characteristics of existing condominiums as evaluated in the market), it would be appropriate to collect and compare data on both “existing condominiums that have not yet been sold” and “existing condominiums that have been sold.” However, as it is difficult to distinguish and extract data from the former, this study only analyzed the data characteristics from the latter, “existing condominiums that have been sold.”
[18] QGIS version 3.30 was used.
[19] The author used the distance matrix tool in QGIS vector analysis to measure distances on the map.
[20] With a population size of 1,512,858 households, the margin of error is less than 5% (±4.347%) at a 95% confidence interval.
[21] Japan’s Ministry of Land, Infrastructure, Transport and Tourism, The *National Land Digital Information*, https://nlftp.mlit.go.jp/ksj/, accessed by Dec 4, 2024.
[22] Social Information Services Co. Ltd provided numerical analyses and plots using Excel Statistics (BellCurve for Excel) version 4.04 (2023/1/18). The exact specification applies to this study’s other analyses and plots.
[23] Terai, Supply and Maintenance of Condominiums; Ota, Vacant Rental Housing; Yamagami, Changes in Population Density Distribution.
[24] Terai, Supply and Maintenance of Condominiums; Ota, Vacant Rental Housing; Yamagami, Changes in Population Density Distribution.
[25] Based on the Smirnov–Grubbs method (significance level 0.05, one-sided test/alternative hypothesis: the maximum value is an outlier).

[26] Regression significance examination results: “Regression variation | Sum of squared deviation: 65,481.842, degrees of freedom: 1, mean square: 65,481.842, F value: 210.5, p-value < 0.001” “Residual variation | Sum of squared deviation: 3,732.516, degrees of freedom: 12, mean square: 311.043”.

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CITY-MAKING AND THE CONFLICT OVER BIKE LANES

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INTRODUCTION

New, and protected, bike lanes,[1] proposed or installed, as part of the infrastructure and public policy of cities, seem to consistently engender considerable resistance, even in cities with an already established network of such lanes. A relatively recent example is the city of Toronto's protected bike lanes that were added on Yonge Street from Bloor Street to Davisville Avenue as a pilot project in the summer of 2021. Those lanes have since, in February 2023, been confirmed as permanent. Nonetheless, during the entire period, from the pilot project to their confirmation as permanent, they faced a tremendous amount of resistance.[2] Indeed, it has been frequently noted that "Across the country, there is a loud backlash against new cycling infrastructure projects – a "bikelash," if you will – despite widespread support for safer cycling infrastructure."[3] The above observation is confirmed by previous, and similar, resistance in that same city to the now permanent Bloor Street bike lanes when they were first installed, also, on a pilot basis.[4] What is more, an earlier bike lane that was installed in 2011, amongst the very first bike lanes in the city of Toronto, on Jarvis Street, was also confronted with considerable resistance. In fact, an entire Mayoral election was seemingly fought over and decided by the division over those bike lanes where Rob Ford defeated the incumbent mayor, David Miller.[5] Ford campaigned using the slogan of a "War on Cars" in relation to the Jarvis St bike lanes and vowed to remove those lanes if elected. Shortly after assuming office, he fulfilled his promise.

THE CITY AS CULTURE AND SITE OF CONFLICT

The extensive literature in relation to the ceaseless conflicts over bike lanes in Canada and the US, in whichever city those lanes have been proposed or installed, often characterizes them as part of the "politics of infrastructure"[6], or "urban space wars"[7], that reflect 'political' battles over the issue of the allocation of road space in the city whereby bicycling continues to face marginalization as a mode of mobility in urban transport systems versus the dominance and priority of motorized forms of transportation in a tussle of competing demands over the limited resource of road space.[8] That is because, it is said, "infrastructure is never neutral and always inherently political."[9] In this view, as a consequence of the power accorded to the automobile as a function of the "politics of infrastructure," automobility is said to be "the primary mobility imaginary controlling the allocation of [urban] space,"[10] whereas other modes of mobility, including cycling tend to be disempowered: "Infrastructures not only reflect the regimes that produce them, but also reproduce the power inequalities inherent (or unexamined) by those regimes."[11] That this conflict is believed to be

animated by a competition over road space is corroborated by the following, as it relates to the city of Toronto's relationship with bike lanes.

Don Valley East Councillor Denzil Minnan-Wong, who chairs the city's works committee, said the conflict is only natural, 'because there's a limited amount of geography — pedestrians, cyclists and motorists are all competing for the same space.'[12]

The implicit idea here is that motorized vehicles, in particular the automobile, is a more efficient mode of travel in the city, and that bike lanes add to congestion since they often require the repurposing of a lane that was previously used for motorized vehicles.

It is inarguable that the problem raised by bicycle lanes and related infrastructure can indeed be made intelligible via this cognitive scheme of competition over road space. Yet, such an interpretation is at the same time a quantitative conception of the problem—the force of numbers—that leaves the qualitative unaccounted for. The issue that has not been addressed (remains uncounted) is the meaning of that conflict as it relates to the city as a form of life. That is because the city, through its social practices, is "oriented to in action and interpretation as an order to which conduct is directed". [13] Conflicts are grounded in a discourse over meaning that exceeds the agenda of any one view, any one party to the conflict.[14] This is consistent with Simmel's insight that conflicts reflect "a common relation to a phenomenon that lies outside of them [outside of the adversaries]" as a unifying commitment that serves as a mediator.[15] Thus, we propose that the division reflected by driving versus bicycling is not an opposition but a difference in relating to the city as a form of life. A struggle over road space is an opposition that is zero sum, whereas difference is where the whole is greater than the sum of the parts. It is that common problem of how we imagine the city as a form of life that inspires the discord over bike lanes. The opposing views are parts of a discourse that touch fundamental problems unspoken and untheorized. Thus, we identify and reformulate the problem as a struggle over the question of the meaning or identity of the city as a form of life (the question of urbanity). The conflict reflects a "tension between … different views of its [the city's] character as a collective."[16] This is confirmed by Simmel as follows: "They [cities] reveal themselves as one of those great historical structures in which conflicting life-embracing currents find themselves with equal legitimacy."[17]

The FUNCTIONAL NEXUS BETWEEN THE CAR AND THE BUSINESS OF THE CITY

Implicit to the representation of the conflict over bike lanes as having to do with competition over road space is an unspoken understanding or assumption as to the meaning of the city as a form of life. And that tacit understanding of the meaning of the city is consistent with the timeless view of the city as the site of doing business—the primacy of commerce—and hence the need for efficiency, and related considerations. Indeed, as Simmel reminds us, "the metropolis has always been the seat of the money economy … [and] concentration of commercial activity . . ."[18] He continues: "Cities are above all the seat of the most advanced economic division of labor".[19] The city has long been the most significant center of the economy. It is the headquarters of many of the most important businesses and the network of industry and services that make for a modern economy. That cities stimulated the economy (provided for jobs and engendered productivity), offered a certain kind of liveliness (as the site of many amenities and forms of entertainments: shopping, restaurants, the theatre, concerts, galleries and museums, and more), and was able to attract sufficient numbers of people to work and play in its vortex, has largely been the recent historical measure of urban vitality. For a variety of reasons, in much, if not all, of North America, the automobile became the primary mode of commuting in and to the city for the purposes of work, school, shopping and leisure. Many drive into the city from the suburbs precisely because the city is site of business, and wish to do so in as speedy a fashion as possible, especially in view of the lengthy commute many must undertake. "[R]oads . . .

were seen as modern arteries of cities where motorised traffic should be able to flow fast without interruptions caused by other modes of transport. One could say that the idea was to build highways throughout the cities."[20] The foregoing is a reminder that the persistence of the city is contingent on it retaining its status as the site of the production and circulation of exchange value. Thus, the concern with the city making itself hospitable to that necessity, with the automobile viewed as integral to that objective. It is unsurprising then that much of the resistance to bicycle lanes make reference to what is good for business and what is good for residents in relation to their participation in the economy. Here are two news media reader comments—selected from amongst many similar comments—in response to the debate over bike lanes that reinforce the importance of the city in relation to its economic function.

"Between bicycle lanes and road patios, city planners don't think about traffic grid lock anyway. You can't have both luxuries and expect to have a thriving economy when cars/trucks can't get around the city for business"[21]

"I think a lot of people are forgetting how important those cars on Jarvis are for our economy. Sure, you may love to ride your bike and hang out with your friends. But there are bike lanes in parks and on the islands for that kind of thing. Leave the commercial parts of the city for those of us who work for a living, and go have fun in the leafy pastures that are all around"[22]

In effect, bike lanes are seen to endanger the integrity of the city as the site and centre of production and consumption. For example, merchant opposition to bicycle lanes that deplete street parking for cars is premised on the city as a site of business and commerce**,** and indeed depends on that identity in order to sustain itself. Merchant complaint is often based on the claim that the depletion of street parking for cars negatively affect sales.[23] In a world dominated by the market, a rationalized world of efficiency, it is predictable that drivers and businesses would object to bike lanes which are seen as incompatible with the ethic and needs of the marketplace.

It is significantly because of the nexus between the car and business (the economy) that street parking has long been available to drivers for little to no cost. Complaints about the 'free ride' that cars receive—whether in terms of free and relatively inexpensive street parking or the building and maintenance of roads as a feature of the extensive infrastructure that the city maintains directed to facilitating the frictionless movement of the automobile and other motorized vehicles—seem to miss this integral connection between the automobile and the city as the site of business par excellence. Relatedly, the automobile has been indicted in relation to the reduction of public space, as a significant chunk of such space is invariably arrogated for roads, parking and other automobile infrastructure. This concern that the urban infrastructure required for the accommodation of the automobile deprives the city of public places that contribute to its vitality is implicitly extended to indict drivers and driving as indifferent to the question of the vitality of the city. Yet, such a view would be inadequate to the stimulating, and possibly erotic, character of the city as significantly a commercial enterprise for some, a terrain of production, consumption and exchange value. In this way, the driver can be said to be a lover of the city in its guise as a place of production and consumption, of an exchange relationship. That the production and consumption that the city facilitates is often experienced as erotic points to the two-sided character of the city that Weber long ago identified, whereby he [Weber] "enables us to appreciate the marketplace [the city] in its way as two-bodied, both functional and aesthetic."[24] The city is not only an economic entity, it is also spiritual; it provides for a spirited relation to being. More specifically, we want to suggest that the conflict over bike lanes has much to do with the tension that is catalyzed as the city struggles with its desire to be both an unmitigated entrepreneurial zone and a sensual city that is spirited. In other words, a conflict between the city as marketplace (functional) and the aesthetic city.

BICYCLING AND THE AESTHETIC CITY

Simmel tells us: "Life, in its flow, is not determined by a goal but driven by a force."[25] By "life, in its flow" he means something like what he calls the creative life, versus the life governed by the normative order, a life of motivated compliance.[26] Driving in the city, we have proposed in the foregoing, is significantly tied to the needs of the city as the site of business and commerce. Whereas, bicycling is perhaps more responsive to that notion of a "force" that is beyond instrumental goals as such, pointing to the aesthetic. While bicycling, one must navigate with more than one's eyes (the primary means of automobile navigation). For instance, the ears are an integral part of bicycling as one is constantly listening for whom or what is coming up behind or around the corner. At the same time, the aural character of the city is fully experienced by the cyclist as s/he is fully exposed to the sounds of the city. Bicycling is also deeply related to the sensation of touch in the ways that one is unsheltered from the elements (wind, breeze, rain, sunshine, snow) with which one both contends and often revels in.[27] Bicycling seems to appeal to the soul, the non-rational, the affective, and the aesthetic. Further, the relentless sense of risk and danger[28] that is bicycling means that the awareness of the body is heightened. Bicycling invites that sensorial experiencing to be primary, in good measure, because of the unique physicality it represents as well as the vantage point it can permit whereby some are positioned relatively high up, due to their height, with a somewhat unimpeded view in ways that permit for surveying and feeling the texture of one's surroundings.[29] Hills and sharp curves take on particular significance for the challenge, pleasure and threats they might, variously and simultaneously, represent. The bicyclist is also deeply available to the metabolism of the city.

S/he is said to not only participate in the urban fabric but to actively contribute to the making of 'the local'[30] because the looking at one another that it permits facilitates connections and interactions.[31] Thus, bicycling performs a more public and interactional city into existence. Essentially, the bicycle permits a certain sensorial and aesthetic relationship to the city that informs its continued hold on many despite the many functional advantages of driving and public transportation, and the risks associated with bicycling (some of which can be self-inflicted via those bicyclists who violate the rules of the road).

The desire for bike lanes and bicycling as an entrenched mode of mobility is, we propose, a desire to experience and produce a form of urban vitality, a kind of aesthetic and affectivity, that differs from and exceeds any which is experienced and produced via the automobile. Bicycling, we could say, gets at the very heart of vitality, the intersection of the sensory and the aesthetic. In this way, for many urban bicyclists, the commute to work is transformed from an adjunct to work to a joyful experience of stimulation and pleasure.

"Dr. David Rosen, a physician who specializes in sleep disorders, doesn't need a parking spot when he bikes from his home in Tenafly, N.J., to a hospital in the Bronx where he works in an intensive care unit once a week. 'Arriving by bike is a fantastic feeling,' he said."[32]

Dr. Rosen's bike ride from his home to his place of work is approximately 13 miles, a distance he could routinely accomplish in less than half the time were he to drive. Yet, Dr. Rosen prefers the more time-consuming mode which he says results in "a fantastic feeling." And presumably, as a physician, Dr. Rosen is almost always pressed for time. However, he willingly 'pays the price' of a more time-consuming commute in order to be rewarded with that "fantastic feeling" that bicycling as a mode of mobility in the city can supply. It seems, that in part, bicycling, like all pleasurable activity, perhaps trades on an altered relation to time. "[E]very pleasure worth its name—music, sex, drugs, novel-reading—derives its particular rush from how it alters our sense of time, how it crumples it up or extends it into something long, lush, and strange."[33]

That time on the bicycle, in the midst of the urban sensorium, is an integral part of the pleasure of the city as form of life. Bicycling might be said to add an element of spiritedness to the city as a form of

life in the way that the elaborate dinner seeks to add specialness to daily life that counters its monotony and routinization.[34] The cyclist can be said to use the bicycle as a method for infusing daily life with creativity, with zestfulness, with what Simmel calls more-than-life.[35] Bicycling is a method for handling the ambivalence of the city as a form of life, that it can be both routinized and scintillating. And it is that that makes bicycling an aesthetic (creative) relationship to the city.

CONCLUSION

The city as a form of life, at its best, must reconcile the extremes of the functional (survival) and the aesthetic (creativity), rather than having to choose between one or the other. It is that two-bodied aspect of the city, its ambiguity, the tension between the functional and the aesthetic as it relates to urban vitality, that the conflict over bike lanes bring to view. That is, the city must ever contend with the "tension between what Simmel calls the desire for life and more-than-life"[36], a struggle between life as business and life as more-than-business. We might then think of the problem or impasse over bike lanes as having to do with developing a just relation between the business of the city (the economy) and the spirit of the city (its creativity). The conflict over bike lanes invariably points to "…a question impossible to settle with finality but needing to be raised, engaged and enjoyed."[37] Analysis, what Toni Morrison calls language, "can never 'pin down' [phenomena]. Nor should it yearn for the arrogance to be able to do so. Its force, its felicity is in its reach toward the ineffable."[38]

NOTES

[1] Protected or separated bike lanes means that motorized vehicles (apart from motorcycles) cannot use these lanes, typically for passing other vehicles. What is more, such lanes typically require the appropriation of a lane for exclusive use by cyclists, whereas previously that lane was used, and seen as the right of, motorized vehicles. Although non-protected bike lanes also typically elicit protest, they require less space to be created and often do not require the appropriation of an entire lane.

[2] Becky Robertson. “People are already complaining about the new bike lanes on Yonge Street.” *blogTO*, June 21, 2021.; Karen Longwell. 2022. “People want Toronto bike lane removed for the benefit of cyclists and the environment.” *blogTO*, March 14, 2022. Accessed June 15, 2022. https://www.blogto.com/city/2021/06/people-already-complaining-bike-lanes-yonge-street/. The irony should not be lost on us that Yonge St has a subway line stretching from Lake Shore (the Southern tip of the city) to Langstaff Rd (in Richmond Hill), which is north of the boundaries of the city. That ought to mean that many of those living in relative proximity to the subway line would find it convenient to take public transit into the downtown core rather than drive.

[3] Matt Bubbers. “The ‘bikelash’ is real: What the war between bikes and cars says about us.” *The Globe and Mail*, August 23, 2019. Accessed July 12, 2020. https://www.theglobeandmail.com/drive/mobility/article-the-bikelash-is-real-what-the-war-between-bikes-and-cars-says-about/

[4] Edward Keenan. “Bloor bike lanes have time – and money – on their side.” *The Toronto Star*, October 16, 2017. Accessed May 28, 2020, https://www.thestar.com/news/gta/bloor-bike-lanes-have-time-and-money-on-their-side-keenan/article_e2380c21-f11e-5903-adde-f3e9a930bbdf.html

[5] Jake Garrett. “On the removal of bike lanes.” *Spacing*. June 24, 2011. Accessed August 17, 2019, https://spacing.ca/toronto/2011/06/24/on-the-removal-of-bike-lanes/

[6] Peter Cox and Till Koglin, eds. *The Politics of Cycling Infrastructure: Spaces and (In)Equality*. Bristol: Policy Press, 2020.

[7] Till Koglin and Tom Rye. “The marginalization of bicycling in Modernist urban transport planning.” *Journal of Transport & Health* 1 (2014): 214–222.

[8] See for instance, among others: Peter Cox. *Cycling: A Sociology of Velomobility* (London: Routledge, 2020); Jeanetter Sadik-Khan and Seth Solomonow. *Streetfight: Handbook for an Urban Revolution* (New York, NY: Penguin Books, 2016); John Stehlin. “Regulating Inclusion: Spatial Form, Social Process, and the Normalization of Cycling Practice in the USA.” Mobilities 9 (2014): 21-41; and Zack Furness. *One Less Car: Bicycling and the Politics of Automobility* (Philadelphia: Temple University Press, 2010).

[9] Peter Cox. “Theorizing infrastructure: a politics of spaces and edges.” *The Politics of Cycling Infrastructure: Spaces* and (In)Equality (Bristol: Policy Press 2020), 15.

[10] Peter Cox and Till Koglin, eds. *The Politics of Cycling Infrastructure: Spaces and (In)Equality.* (Bristol: Policy Press, 2020), 11.

[11] Peter Cox. *Cycling: A Sociology of Velomobility*. (London: Routledge, 2020), 20.

[12] David Nickle. “Conflict between cyclists and drivers ‘only natural’ in Toronto.” *Toronto.com*. July 24, 2012. Accessed August 21, 2021, https://www.toronto.com/life/wellness/conflict-between-cyclists-and-drivers-only-natural-in-toronto/article_3a12024c-7d16-526b-90e3-ee5b506a5351.html?

[13] Max Weber paraphrased in Alan Blum. *The Imaginative Structure of the City*. (Kingston: Queen’s-McGill University Press, 2003), 29

[14] Alan Blum. *The Material City*. (Kingston: Queen’s-McGill University Press, 2003).

[15] Lewis Coser and Bernard A. Rosenberg. *Sociological Theory: A Book of Readings.* (New York: Macmillan, 1976), 47-48

[16] Alan Blum. *The Imaginative Structure of the City*, 3.

[17] Georg Simmel. "The Metropolis and Mental Life” *On Individuality and Social Forms*. Donald Levine ed. (Chicago: The University of Chicago Press, 1971), 339.

[18] Simmel, “The Metropolis and Mental Life,” 326.

[19] Simmel, 335.

[20] Till Koglin and Tom Rye. “The marginalization of bicycling in Modernist urban transport planning.” *Journal of Transport & Health* 1 (2014): 217.

[21] Clarrie Feinstein. “Toronto bike rally lights up the night for cyclist’s rights.” *The Toronto Star.* October 2, 2022. Accessed December 20, 2022. https://www.thestar.com/news/gta/toronto-bike-rally-lights-up-the-night-for-cyclist-s-rights/article_db1818a2-e83e-5c66-8f83-b73691a35e60.html

[22] Garrett, “On the removal of bike lanes.”

[23] Lea Smith, et al. *Economic Impact Study of Bike Lanes in Toronto's Bloor Annex and Korea Town Neighbourhoods*. (Toronto: Clean Air Partnership, 2017), 14. Accessed November 11, 2020. https://www.tcat.ca/wp-content/uploads/2017/12/Bloor-Economic-Impact-Study-Full-Report-2019-09-03.pdf
[24] Blum, *The Material City*, 30
[25] Georg Simmel. "The Conflict in Modern Culture." *On Individuality and Social Forms*. Donald Levine ed. (Chicago: The University of Chicago Press, 1971), 382
[26] Blum, *The Material City,* 6.
[27] Cf. Cox 2020, 103-104; and Jungnickel & Aldred 2014, 246
[28] Muriel Draaisma. "Police crack down on aggressive drivers in week-long cycling safety blitz." *CBC News*. July 2, 2019. Accessed May 4, 2020. https://www.cbc.ca/news/canada/toronto/toronto-police-focus-vulnerable-road-users-safety-cyclists-campaign-1.5196979
[29] Cf. Rachel Aldred. "'On the outside': constructing cycling citizenship." *Social & Cultural Geography* 11 (2010): 46. Accessed June 20, 2021, doi: 10.1080/14649360903414593.
[30] Dave Horton. "Environmentalism and the bicycle." *Environmental Politics* 15 (2006): 48. Accessed July 18, 2019, doi: 10.1080/09644010500418712.
[31] Cf. Nicholas Scott. *Assembling Moral Mobilities: Cycling, Cities, & the Common Good*. (Lincoln: University of Nebraska Press, 2020).
[32] Jane Margolies. "Awash in Asphalt, Cities Rethink Their Parking Needs." *The New York Times*. March 7, 2023. Accessed June 1, 2023, https://www.nytimes.com/2023/03/07/business/fewer-parking-spots.html
[33] Parul Seghal. "Why we never have enough time." *The New Yorker*. March 6, 2023. Accessed June 22, 2023. https://www.newyorker.com/magazine/2023/03/13/saving-time-book-review-jenny-odell
[34] Mary Douglas. "Deciphering a Meal." *Implicit Meanings: Essays in Anthropology*. (London: Routledge & Kegan Paul Ltd., 1975), 249-275.
[35] Georg Simmel. "Life as Transcendence." The View of Life: Four Metaphysical Essays with Journal Aphorisms. (Chicago: The University of Chicago Press, 2015), 8.
[36] Blum, *The Material City*, 31
[37] Blum, 147
[38] Toni Morrison. "The Nobel Lecture in Literature." *The Source of Self-Regard*. (New York: Vintage International, 2020), 106

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DESIGNING FOR INTERSECTIONALITY: ECOFEMINISM, ENVIRONMENTAL EQUITY, AND GENDER FLUIDITY'S IMPACT ON THE FUTURE

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INTRODUCTION

Americans today live in a consumptogenic society, a world that has been characterized by institutions, policies, business practices, and social norms that embed principles of capitalism and colonialism[1] This system encourages and rewards excessive production and hyper-consumerism of goods and services that are unhealthy and inequitably distributed[2] To strategize a more sustainable culture, design thinking can be leveraged to influence a change to goods, services, and experiences that shift society away from this consumptogentic behavior.

Social psychology tells us that behavior is produced by a set of systemic forces, in order to change society, sustainable consumption needs to become a social norm;[3] however, stereotypical gender identities and roles of Baby Boomers and Generation X have posed a barrier. For younger generations, environmental intersectionality must advocate for the protection of all people and the planet, and design has the aptitude to advance this movement. This paper will address how consumer behaviors, generational demographics, gender identity, and intersectionality play a role in redefining and redesigning a more sustainable future.

Generational Shift

As the stakeholders of the planet's future, designers need to consider what is meaningful to Millennials, Generation Z (Gen-Z), and Generation Alpha. These demographics value environmental conservation, social justice, equity, transparency and authenticity, freedom of self-expression, and sustainable consumption.[4] With every passing year, they are also gaining more spending power and greater societal influence.

Millennials

Between 1983-1997, Millennials were the first generation to have extensive access to technological advancements, the internet, and globalization. With more women in the workforce than prior generations, typically waiting longer to get married and have children, this generation has greater spending capacity than previous generations. Prioritizing personal life and goals alongside social issues, their purchases align with their values of brand authenticity and trust, elevated and equitable services, and products that are peer endorsed, convenient, high quality, and unique/exclusive. In a research study of Millennials from 17 different countries, 78% would recommend a company they

believe is a good citizen and 71% would be loyal to that business.[5] Recognizing their influence on people, societal trends, and cultural shifts, digital platforms allow this generation a pathway to express themselves leading to the rise of the influencer. With less time to spend shopping, and great trust placed in specific people who share their values and lifestyle, influencers have become a one stop shop linking customers to products and the online shop to purchase them. [6]

Generation Z

Known as digital natives, Gen Z was born between 1997-2012 and grew up with unprecedented access to information and global connectivity. They are the most active generation towards climate change and sustainability and look for opportunities to connect with other people who value these ideals. This value set directly connects to their retail relationship as they care deeply about a company's values and purpose, wanting to know and connect with the mission behind the corporation, and expecting complete transparency. Embodying conscious consumption, they view purchases as a matter of ethical, social, and sustainable concern, placing transparency, authenticity, and a higher purpose at the top of their list for retailers. They also view consumption as 'access' to an object, rather than the possession of it, leading to the increase in the shared and circular economy. As identity nomads, Gen-Zs look to many different micro-influencers that align with their values. Thus, they take a more contemplative approach to purchasing, researching options thoroughly and viewing shopping as a multipart experience. Unlike Millennials, only 26% of Gen-Z uses social media to make a purchase, preferring to purchase in-store as opposed to on-line due to their prioritization of human relationships and desire for memorable experiences.[7]

Generation Alpha

Born between 2012 – 2025, Generation Alpha is the fastest growing generation to date and plays a major role in influencing other generations buying habits. They have been born into a global climate crisis, rapidly changing world of technology with machine learning and artificial intelligence, and evolving family dynamics. While not much is known yet on their consumer behaviors, Gen-Alpha's ultra-digital life coupled with an acute awareness of their impact on the planet and people and their unique relationship with their Millennial parents has made them highly influential household decision-makers.

Collectively, these generations have an increased interest in sustainability, along with a greater likelihood to hold others, including brands, accountable. They are determined to make the world a better place, which raises the questions: What is the relationship between these generations' values, their identities, equity, and sustainability – and how will that influence the future of design and retail?

ECOFEMINISM AND BEYOND

Looking at the history of ecofeminism and current societal movements provide insights into how gender identity factors into the sustainable behaviors and how these ideals could redesign the future. Emerging in the mid 1970's, Ecofeminism is a philosophical and political movement that combines ecological and feminist concerns. Author Françoise d'Eaubonne coined the term in 1974, basing it on the fundamental feminist tenets of equality between genders, a revaluing of non-patriarchal or nonlinear structures, and a view of the world that respects organic processes, holistic connections, and the merits of collaboration. The movement set out to address the domination of women and the dilapidation of the environment as consequences of patriarchy and capitalism.[8] More recently, the United Nations echoed this ambition through sustainability goal number five which sets out to achieve gender equality and empower women and girls, stating that "Gender equality is not only a

fundamental human right, but a necessary foundation for a peaceful, prosperous, and sustainable world"[9]

Influential Voices

Many individuals in Gen-Z are gaining their eco-knowledge from compelling ecofeminist voices, connecting these individuals and their causes to brands that support the same goals as themselves.[10] Their motivations often turn to advocacy and action, connecting sustainability to equity and social justice. Greta Thunberg, a youth leader in the sustainability movement, started her *Fridays for Futures* protests as an individual act. Shared through social media, they have become a global movement leading to climate marches that include all generations and nationalities. As a female change-maker and compelling ecofeminist voice, she is paving the way for other intersectional eco-activists while campaigning for equal access to a healthy planet no matter one's socioeconomic status or place of origin.

Another example of a youth ecofeminist activist is Patience Nabukalu, organizer for *Friday's for Future Uganda* and the founder of *Youth Empowerment Initiative Uganda*. She demonstrates the expanding intersectionality of activism with issues of gender and race, human rights and environmental conservation. Intersectionality, coined in 1989 by Kimberle Crenshaw, speaks to the interconnected nature of race, gender, class, and specifically sought to reveal the systems of oppression of African American women.[11] These are just some examples of youth generations' expression of values and the way they intersect economically and ecologically, illustrating why this intersectionality should be weighed heavily in discussions about rethinking retail. For these generations, each purchase will be weighed against a bigger moral picture.

Women continue to advance their education and increase their position in the workplace, resulting in a growing economic contribution and consumer influence. In the United States, women are predicted to control $30T by 2030, a 300% increase from $10T in 2020.[12] The summer of 2023 in the USA saw this first hand due to the economic impact that Beyonce, Taylor Swift, and the Barbie movie had. These iconic female change-makers utilize their creativity and storytelling to convey deeply meaningful messages centered around feminism and equality that resonates with Millennials and GenZ. Through resulting in mass consumerism, "Taylornomics" generated $5B in US consumer spending[13]; imagine the impact this could have if this intersected with sustainability initiatives. Though Swift is not known as an eco-feminist, she is a longstanding advocate for LGBTQIA+ rights, another form of intersectionality, and her lyrics have encouraged generations of youth towards acceptance, inclusivity, and belonging. In September 2023, a single Instagram post by Swift encouraging her millions of followers to register to vote resulting in more than 35,000 new voters registered through Vote.org, a 23% increase over their highest number the year prior." [14] This further demonstrates the clout these public figures have and the trickle-down impact on shifting societal perceptions, values, and thus consumer behaviors.

Gender Identity

While women have led in sustainable purchases, the dismantling of gender norms within GenZ is helping sustainable consumption grow across the gender spectrum. Historically, women are more open to learning new ways to be sustainable. They are statistically silent leaders, particularly within categories defined by gender role stereotypes. One study reported that women make sustainable purchases linked to aspects of living: cleaning products, groceries, or re-use products and materials.[15] Another study showed men are less likely to participate in sustainable practices and consumption because they do not want to have a feminine connotation attached to them.[16]

As younger generations breakaway from gender norms, they are embracing sustainable practices regardless of biological sex. Gen-Z men, and people who identify as being male, are more likely to participate in a lifestyle of health and sustainability which suggests that sustainable consumption is not based on biological identity, but rather on the gender which they identify.[17] Gen-Z tends toward gender neutrality and gender inclusivity, where sexual identity is a spectrum. One example is Pattie Gonia, a drag queen and outdoor activists, who promote environmental conservation. Pattie's Instagram depicts a world where all people, even a drag queen in high heel boots, wig, and a gown made from a reclaimed tent, can climb a mountain or clean up a beach as seen in the documentary "Dear Mother Earth". As traditional gender norms fall to the wayside, younger consumers seek to shift perceptions through their self-expression, behaviors, and fashion. Their desire to maintain ambiguity is something designers can leverage.

It is important to acknowledge the distinction between unisex and genderless. Unisex serves to accommodate both masculine and feminine by finding a middle ground without any specific gender in mind, whereas genderless and gender fluid step out of the gender binary to include LGBTQIA+ community. These distinctions are important as the intersectionality between conscious behaviors and gender fluidity is evolving. As the values and behaviors of these generations demonstrate, the physical experience from the retail store to civic spaces provide an opportunity to design more inclusively.

Intersectionality's Influence

Intersectionality expands the definition of Ecofeminism and shows how an individual may face multiple types of overlapping discrimination simultaneously. For today's youth, the environmental movement needs to become even more inclusive, where sustainability, gender fluidity, religion, physical ability, black, indigenous, and people of color (BIPOC) are at the center of environmental activism and experiences. According to Lesley-Ann Noel's Critical Alphabet, intersectionality considers various forms of social stratification, stating that they do not exist separately but are woven together.[18] With this acknowledgment comes the potential to create inclusive versions of movements that advocate for the protection of people and the planet in mindful and equitable ways.

According to a Pew Research Centers analysis of the 2018 US Census Bauru's data, 53% of Gen Z and Gen Alpha identify with two or more races, a dramatic shift from the 22% of Millennials and only 13% or less of Gen X or Boomers.[19] Additionally, In a 2022 Gallup poll, roughly 21% of Generation Z Americans identify as LGBTQ+, and of that 57% indicate they are bisexual.[20] In terms of queer and nonbinary gender identities, research suggests that sustainable consumption is not based on the biological identity of a person but rather based on the gender they identify with.[21]

As such, design must also become part of the intersectional sustainable solution. Sasha Costanza Chock states In *Design Justice: towards an intersectional feminist framework for design theory and practice*:

"Design is key to our collective liberation, but most design processes today reproduce inequalities that are structured by what Black feminist scholar Patricia Hill Collins calls the matrix of domination: white supremacy, heteropatriarchy, capitalism, and settler colonialism.[22] These and additional intersecting inequalities are manifest at all levels of the design process. Universalist design principles and practices are single-axis, erase certain groups of people, specifically those who are intersectionality disadvantaged or multiply-burdened under white, heteropatriarchy, and capitalism."[23]

RETAIL'S ROLE

If eco-behaviors are not a result of one's genetic sex, but are developed through a socialization process, and retail play a major role in society and socialization, then retail design can aid in forming eco-conscious consumer behaviors. Shopping is more than a purchase, it's a means of self-expression

and self-realization, the ability to make choices to express one's true self. If retailers break stylistic gendered stereotypes of how men and women shop then stores will provide for self-expression, freedom of exploration, and choose more sustainably. By avoiding binary choices and gendered implications in materials, colors, and branding, store designs can allow space for honest consumer representation rather than a projected heteronormative perception. Reflecting diversity, equity, and sustainability commitments through storytelling across physical brick and mortar, virtual, and social spaces will create a more inclusive and intersectional environment.

One example at the forefront representing intersectionality is Levi's, an evolutionary American heritage brand founded in 1853. The brand's *Buy Better/Wear Longer* campaign tapped a younger diverse set of influencers, underscoring Levi's connection to the values of this demographic. The campaign featured activists who identify across the gender and racial spectrum, including actor Jaden Smith, YouTuber Emma Chamberlain, footballer Marcus Rashford, and hip-hop artist Xiuhtezcatl — all whom advocate for slow fashion (2024).[24] Levi's call to action embraces individuality and self-expression while championing sustainability, sparking greater cultural awareness with intersectional influence.

Levi's constructs a customized consumer experience by engaging them in the process of curating their personal denim wardrobe. Realizing this within the store, a tailor shop creates a service touchpoint along the customer journey, providing a spatial gesture that communicating Levi's mission of self-expression and sustainability. This service design concept follows Fletcher's [25] notion of customization to facilitate slow consumption. Customers can have off-the-rack jeans tailored to their specifications or bespoke jeans designed for their preferences, providing an inclusive approach for all body types and needs that are often overlooked, such as trans, queer, or differently abled bodies. This service allows customers to embellish their denim, reflecting their personal message and communicating their authentic and unique identity to the world. The tailor shop illustrates Levi's dedication to customer care and is a crucial link to emotionally connect people to their product, their life journey to the products lifecycle journey.

CONCULUSION: A CALL TO ACTION

Thoughtful design interpretation of these shared values can translate a brand's purpose-driven ideology into intentional and sustainable physical experiences. Space, in conjunction with authentic storytelling messaging, will result in built environments that attract more Millennial, Gen-Z, and Gen Alpha consumers. People want to see brand's and corporations physically evolving and changing to adapt sustainable and inclusive measures. Youth generations seek spaces for self-expression and freedom to explore and grow as people. Immersive and memorable experiences occur in environments that are welcoming and affirming and allow for an inclusive invitation to build a personal relationship with the space. Designing spaces to maximize the experience per square foot, ensuring that in every moment, at every touchpoint, the principles of design intersect with the principles of the people. The following are some strategies to incorporate into the design process to aid designers, brands, and corporations towards a more inclusive and sustainable place.

Redefining the Retail Design Process

Within the United States, the retail design process begins with consumer insights and strategy, resulting in the development of "Personas." As Costanza-Chock pointed out, these primarily are white, hetero, and patriarchal. To create a sustainable future, these personas need to be intersectional and inclusive of all gender and racial identities. By utilizing tools such as the Design Justice Matrix of Domination, the store can be designed through multiple intersectional journeys. Traditionally personas also focus solely on the customers, however; for a sustainable brand/project it is also

important to take a holistic approach. By expanding the personas and journey narratives to include the stories of the makers/producers the designed experience will create a deeper understanding of the relationship between producer and consumer, the resources that go into each product, and the impact the purchase has on other's lives.

Position Purpose at the Forefront

Creating connections between the people, place, and brand purpose is critical in changing how people behave and consume. Designers have the opportunity to change the purpose of place by creating spaces that promote sustainable behaviors through services and activities which elevates the mission at the forefront of the experience. Through these service design elements, the physical space can engage and educate people on more sustainable behaviors and create a place to cultivate activist through brand purpose aligned activities. Adding in free services would provide equitable access to the services that have been primarily reserved to those with financial means and privilege.

Intersectionality in the Details

The design details matter. For retail spaces, fitting rooms, product categorization, graphic imagery and messaging, display model selection, and in-store brand ambassadors are key considerations when designing inclusive retail environments. Breaking stylistic gendered stereotypes of how men and women shop and behave in public spaces would create space for expression and a sense of autonomy to explore and identify freely with choices. Avoid binary choices in space navigation and disconnecting gender implications in finish material, color, and branding selections. Responsible material sourcing and the inclusion of Biophilic and WELL Building principles further the ability to design spaces that are welcoming and inclusive of all. By designing transparency into the origination and sourcing of materials within the physical space will create a direct alignment to youth generations values and demonstrate how they have influenced the built experience.

Sustainable Storytelling

Creating memorable experiences through the design and its visual elements will establish stronger relationships between the people's values and the company's philosophy, aiding in developing a personal relationship and deeper loyalty or connection. Through visual communication elements, education can be incorporated into the experience and encourage shifting consumer behaviors towards being more sustainable. Creating a spaces that incorporates education and storytelling in immersive and memorable experiences will be even more impactful for younger generations.

Activate Alliances

As more compelling ecofeminist and intersectional environmentalist voices rise to become global public figures of influence, brands and corporations can create alliances with these figures. Engaging intersectional eco-activists as ambassadors or sustainable developers would influence behaviors towards sustainable actions.

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ARCHITECTURE AND PLACE: CONTEXT SPECIFIC APPROACH TO HOUSING DESIGN

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INTRODUCTION

The Tanzanian government's development initiatives are transforming rural communities by establishing fundamental social amenities such as schools, healthcare centres, and local administrative offices. New infrastructure, staffed with dedicated teachers, doctors, nurses, veterinarians, local government officials and the like, promises a brighter future. However, the inadequate supply of appropriate housing for these professionals remains a pressing challenge. Professionals keen to support community development initiatives find themselves in substandard living conditions that hamper their ability to serve effectively and reduces their chances of staying long-term.[1] This challenge threatens to undermine progress.

Access to adequate and affordable housing is universally recognized as a fundamental human right and a crucial component of sustainable development.[2] Moreover, while the Sustainable Development Goals (SDGs), address critical issues such as informal settlements, slums, and homelessness,[3] these initiatives need to be examined alongside a deeper understanding of traditional housing cultures and their intersections with contemporary aspirations. As a methodological starting point, this paper offers a preliminary analysis of existing housing typologies in rural Tanzania and a scoping study of the formal, material and tectonic transformations made by civil servants.

Colonial legacy

Like many countries in the Global South, Tanzania experienced successive periods of colonial rule by Omani Arabs, Germans, and then the British from 1840 to 1961.[4] The long-lasting impact of the colonial rule was the emergence of cities around colonial administrative centres triggering a surge in rural-to-urban migration after independence.[5] This rapid urbanization led to housing shortages and the rise of informal settlements. Although the government attempted to address these issues with public housing projects, it struggled to keep pace with the influx of migrants and eventually relied on residents to find their own housing.[6] Meanwhile, rural areas were unregulated with rural residents increasingly taking the initiative to transform their homes.[7] Many of these houses draw inspiration from urban trends.

In many regions particularly in developing countries, rapid urbanisation escalates housing challenges leading to proliferation of informal settlements and inadequate housing. As a result, most of the prevailing research on housing remains focused on urban areas and the challenges that accompany this urbanisation, whereas the rural housing situation remains under researched.

Architectural incorporation and hybridisation

Colonialism significantly influenced architecture in Tanzania. Before colonial rule, house designs were shaped by geographic locations, climate, local materials and construction skills, and the sociocultural and socioeconomic activities of the various ethnic groups. Vernacular houses were constructed using materials like thatch, mud, poles, and bamboo.[8] The colonial period introduced new architectural styles and building techniques especially in their administrative centres, including whitewashed coral stone masonry, concrete block masonry, and buildings featuring Islamic/Persian and German Gothic influences.[9] This shift led to a preference for concrete masonry over traditional materials, as people began to view concrete construction as a modern, durable, and prestigious symbol of social status.[10] The aspiration for European-style villas and bungalows became evident.

Urbanisation, technological advancements, and globalisation are common experiences in many countries in the Global South, with people migrating from agrarian rural areas to cities in search of industrial and service sector jobs.[11] As they move, they encounter modern building styles in urban settings, and they often incorporate these designs into their vernacular architecture, resulting in a hybridisation of styles.[12] This transition has sparked diverse scholarly debates: some supporting the idea of hybridisation,[13] while others advocate for preserving vernacular architecture as cultural heritage and a symbol of identity,[14] and others reflect on the potential of vernacular architecture for sustainable design solutions.[15]

RESEARCH DESIGN

The broader study from which this paper draws from is grounded in interpretivism and has been designed to explore these housing dynamics through ethnographic methods such as interviews and observation techniques, seeking to understand rural civil servants' experiences and aspirations around housing.

As Tanzania is still largely rural, there was a plethora of potential sites of study. Case study strategy has thus been employed to select one representative rural area to study in detail. Magoma ward which is in Korogwe district, Tanga region was selected and three villages in it, namely Makangara, Kwemazandu and Mkwajuni/Sekioga were studied. Tanga is a coastal region in the northeastern zone of Tanzania. Its selection as a case study was due to its importance throughout the colonial period from the Arabs to the British[16] therefore would presumably possess colonial architectural influences. The selection of Korogwe district within the region on the other hand was based on having prior contacts and knowledge of the area, whereas Magoma ward was recommended by these contacts for its variety and richness as well as a diverse range of civil servants.

In line with the ethnographic approach, the study involved staying in one of the three villages for two months on and off. In that time a scoping study of existing housing typologies in the area was conducted and 20 participants, mainly civil servants, within the three villages were identified. Their houses which were of different typologies in terms of form, materiality and construction techniques were observed and analysed on their responsiveness to everyday domestic practices as well as the rural context in which they are located.

Participants were also observed in their homes together with other members of their households as they naturally used their environment to understand the spatial and social relationships within the culture, particularly in the domestic setting. Both participant and non-participant observation techniques were used, e.g. sharing a meal at their homes, engaging in the other domestic activities, spending time in their homes and interacting with residents to learn from them. The civil servants were also interviewed aiming to determine the causes and effects of the spatial and technological transformations in housing on different aspects of their lives. Discussions of some of the

observational findings with the interviewees also took place, for example, asking them about some of their domestic practices and why and how they do things the way they do.
The interviews took about an hour and the observations about 2 to 3 hours a day, per participant.
Among the 20 participants, 2 original villagers were interviewed to gain insight about how housing design and construction has evolved over time, and 2 local builders were also interviewed and observed as they built houses to gain insight on their expertise in construction, past and present, such as building materials production and procurement, drawing the house plans etc.
This paper presents the scoping study on existing housing typologies and the formal transformations to the housing stock driven by the needs of civil servants.

EXISTING HOUSING SITUATION

The ethnographic study revealed that the inadequacy in the housing options and living conditions drives civil servants to resort to either self-built housing solutions, modifying the houses they find or living in an urban area very far from where they work.
This perceived inadequacy stems partly from the perception that vernacular architecture, although rooted in local traditions, is outdated and no longer accommodates contemporary needs. As civil servants strive for modernity influenced by colonial legacy, rural-urban interactions and globalisation, they face challenges reconciling traditional practices with modern building technologies.

Housing typologies

Existing housing typologies or patterns identified in this study include five distinct categories as detailed below:

The government-built house

Typically, the government does not provide housing for civil servants. However, in some cases, it has constructed houses for specific kinds of professionals, such as one house for a doctor and one to three houses for primary school teachers near their facilities. These government-built houses are variations of the 'Swahili house' design,[17] featuring a main house connected to an annexed unit by an open courtyard – as illustrated in Figure 1.

Figure 1. A typical government-built Swahili type house for a primary school headteacher in Makangara village, Korogwe district, Tanga, Tanzania

The institutional house

Other civil servants often find rental housing through religious institutions, parastatals, or NGOs that operated in rural areas during the 1970s and 1980s. These properties are dated from the period, one or two-bedroom detached or semi-detached houses by design and built in multi-unit configurations with shared lavatories. Originally constructed for staff or members of these organizations, the houses are now available to the public.

Figure 2. Two of a set of multiple one-bedroom units that were built for past courthouse staff and have now been handed to the government for current incoming civil servants. These two particular units are reserved for the ward executive officer of Magoma ward, Korogwe district, Tanga, Tanzania

The family-turned boarding house

Rural residents often build family homes with no intention of renting them out. However, as grown children move to urban areas, some homeowners convert these houses into multifamily rental units for incoming civil servants. This setup allows the owner to live in some rooms while renting out others, with tenants choosing to rent one or more rooms based on their household size and needs. Shared kitchens, toilets, and showers are commonly located in a separate outdoor unit.

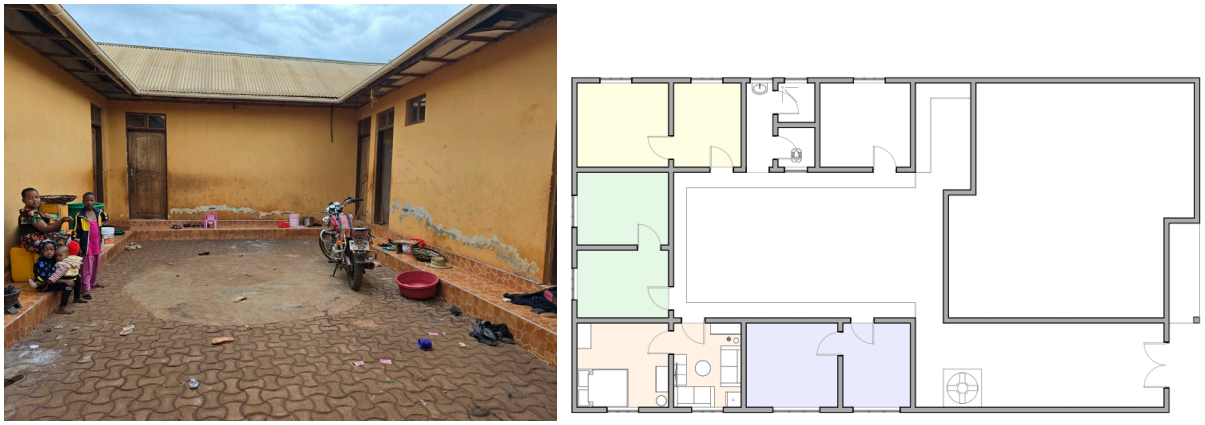

Figure 3. This is an example of a setup whereby the homeowners live in the main house in front, and they have added four one-bedroom rental units at the back, with a shared toilet and shower and no kitchen. Located in Makangara village, Korogwe district, Tanga, Tanzania

The boarding house

In recent years, rural residents have started building multifamily rental houses, offering tenants the option to rent one or multiple rooms based on their household size. These houses typically include shared facilities such as toilets, showers, and kitchen areas, though some may lack a kitchen. Some civil servants rent the entire house as a single-family unit. These properties vary in design and can include numerous rooms to accommodate many households.

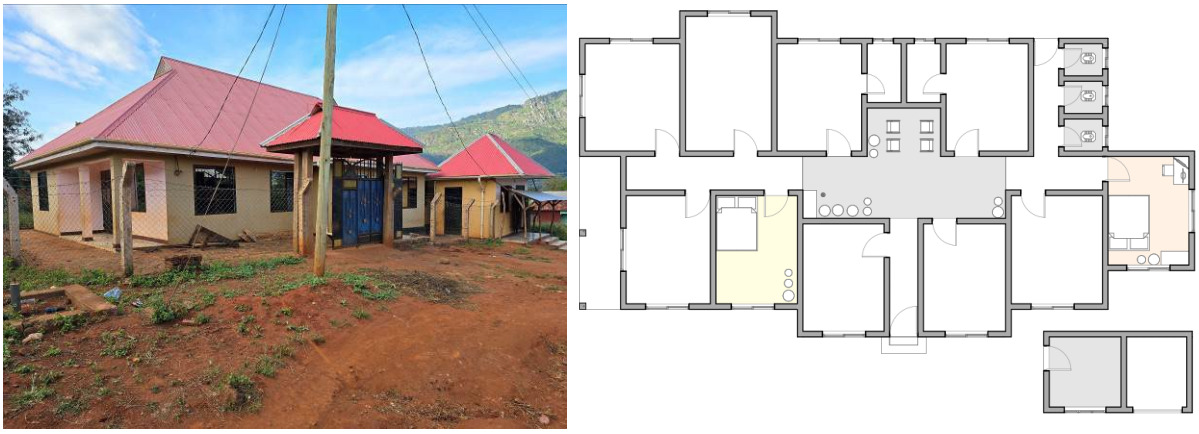

Figure 4. This "boarding house" has 10 rooms, 2 of them ensuite, and each room is a unit containing a different household ranging in size from single people to young families. Located in Makangara village, Korogwe district, Tanga, Tanzania

The semi-vernacular house

Despite the trend of rural residents transitioning from traditional mud-and-pole construction to modern masonry, with vernacular houses becoming increasingly rare even in rural areas, some areas still feature somewhat vernacular-style homes. In these areas, this style of houses remains a primary rental option for civil servants. These houses represent a hybrid construction model, combining mud-and-pole with modern technologies, though they typically lack animal sheds that was common feature of vernacular house.

Figure 5. The living/ sleeping unit is made of traditional mud and pole walls with a modern corrugated iron sheet roofing, and concrete flooring, whereas the kitchen is a typical traditional construction. This is a local resident's homestead located in Kwemazandu village, Korogwe district, Tanga, Tanzania

THE FINDINGS

Housing Unbefitting of Their Status and Preferences

Interviews with the civil servants indicate that they often found rural housing unbefitting of their status for several reasons. Government-built housing, for instance, is typically in short supply, reserved only for the highest-ranking staff, leaving others to fend for themselves. Most of these houses, constructed primarily in the 1970s, are now dilapidated due to a lack of maintenance. Additionally, the Swahili-style layout, with toilets, showers, and kitchens located outside, was disliked, especially when access is required at night. Furthermore, the building technologies used, such as wire-meshed windows, are considered outdated and undesirable.

Institutional houses, family-turned boarding houses, and standard boarding houses were similarly unattractive due to their inability to provide enough space to meet the needs of a family. These accommodations often come as single-bedroom units without kitchens, and the shared spaces, such as bathrooms, lead to a lack of privacy and frequent disputes among tenants.

Semi-vernacular houses were also undesirable. Traditional construction methods were regarded as outdated and uncomfortable, hard to keep clean, and not as durable as modern houses. These homes often harbour harmful pests and insects like cockroaches, rats, and snakes, adding to their unattractiveness.

Own Way of Housing

Due to unsatisfactory housing conditions some civil servants choose to look for employment opportunities elsewhere while others choose to remain in rural areas and employ local builders to construct their own houses to suit their aspirations or rent in urban areas or villages far from their work. Those that build their own homes typically follow one of the three patterns described below:

The incremental house

Faced with financial constraints, many civil servants adopt a staged approach to homebuilding by building incrementally. They often start with a smaller unit, allowing them to move in quickly and reduce rental costs. Over time, they build the larger, more comfortable home. Alternatively, some begin by constructing the main house and move in before it's fully completed, using the saved rent money to finish it into their dream home.

The low-cost house

Typically, these houses are constructed with burnt clay bricks and roofed with corrugated iron sheets. However, due to a limited income, some civil servants opt for more affordable finishes. This can include plastering the walls without painting them, or not plastering at all, using wire-meshed timber-framed windows, cement-sand screed floors, and chipboard ceilings. While these practical finishes might not fully meet their aspirations, they are an acceptable compromise compared to renting in boarding houses.

Figure 6. A low-cost house built by a primary school teacher in Kwemazandu village, Korogwe district, Tanga, Tanzania

The modern bungalow

This example at its core is also a burnt clay brick or cement block house with corrugated iron sheet roofing as many of the rural houses but it has been designed and finished in a way that it resembles the modern-day bungalows that can be found in cities and towns endorsing how the urban lifestyle and housing trends are held in high regard and are the source of inspiration. The walls are plastered and painted, the roof is no longer gable but hipped, the columns and window openings are ornamented with cement moulding, the floors are tiled, the ceiling is of gypsum boards and the windows are no longer timber framed wire meshed windows but aluminium framed sliding windows.

Figure 7. A secondary school teacher has built this modern bungalow house and now lives here with his family after previously renting a house in Makangara village while working in Mkwajuni village. This house is located in Mkwajuni village, Korogwe district, Tanga, Tanzania

Civil Servants Pioneering New Housing Designs in Rural Areas

Transformation in building form and layout

The influx of civil servants in rural areas increased in the years between early 1970s and 2000s as the government put efforts to bring about development throughout the nation post-independence.[18] As they settle the civil servants become agents of a new aspirational way of designing and constructing houses in the rural communities. While the discussion of which is outside the scope of this paper, the interviews with civil servants reveal varying exposure to urban and rural conditions, their mobility/transience, ethnic backgrounds, worldviews, life experiences as well as professional and personal ambitions, play an integral role in this phenomenon.

Those that have had exposure to urban lifestyle and housing design and construction uphold or embrace and import the urban lifestyle and architectural trends in the rural areas. They seek or build houses resembling what they have seen in urban areas, and this becomes the end goal or source of inspiration to the original rural dwellers as well.

The data from interviews and scoping of typologies attest that housing design and construction in rural areas has been transforming from the pre-colonial vernacular multi-unit homesteads into the 1970s government-built range of 'Swahili house' forms and thereafter into ‘modern bungalows’ houses, of which all functional spaces are within a single unit. This shift reflects a growing preference for more integrated and convenient living arrangements.

The trend of transformation, from vernacular forms to Swahili houses to modern bungalows, typically begins in urban areas and spreads to rural areas and this can significantly be attributed to the civil servants’ agency and the aspirational urban lifestyle.

Transformation in building technology

There has been a transformation from the traditional building technology of poles framing and mud-infill walling, thatch roofing and earthen flooring into burnt clay brick walls, cement-sand screed floors, and corrugated iron sheets roofing. Windows are timber framed, with wire mesh for insects screening and iron bars for burglar proofing, and the more recent trend is the aluminium framed, sliding, glass windows, which is a notable deviation from simple holes in the walls if any, of the vernacular technology.

Complex spatial practices

The scoping of typologies revealed civil servants often make noticeable modifications to the rental houses they live in, particularly the government-built and institutional house types. For example, they might create sheds for keeping livestock in the courtyard or compound, establish horticulture gardens outside the house, transform the store or shower into a livestock shed, or add an indoor toilet. These changes reflect their efforts to adapt their living spaces to better suit their needs and lifestyles.

On the other hand, those who have built their own aspirational bungalow-type houses also continue to make modifications. They often add outdoor kitchen units and dishwashing areas where most of the cooking and dishwashing takes place. Additionally, they construct sheds for livestock keeping. These modifications enhance the functionality of their homes and align with their practical needs, but they also depict the mismatch between the aspirations for an urban lifestyle and their persistent traditional domestic practices.

Figure 8. It can be seen here that on the modern bungalow seen in Figure 7, the owner has added a banana tree garden just beside the house. Beyond the banana trees are a chicken shed (seen on the image on the right) and a building under construction that contains a secondary kitchen, storage, and two rooms as single room rentals

CONCLUSION

A variety of housing typologies are needed to fit the diverse profiles of civil servants assigned to rural areas. Some settle with their families in these communities, while others are short-term residents, viewing the rural area as merely a temporary posting from which they can be relocated at any moment. Incoming civil servants come from various ethnic backgrounds and upbringings. Some are used to urban life and find rural living a new experience, while others grew up in rural areas and are familiar with the environment. These differing needs highlight the importance of diverse housing options in terms of size, layout, and ownership.

Transplanting urban housing patterns into rural areas heightens risks that much of this housing does not meet the complex needs of a transitional communities. A failure to identify and negotiate the rural context and traditional practices, such as keeping animals, vegetable gardening, and outdoor cooking, creates a functional mismatch. This paper shows that this process usually leads to numerous incremental additions to the compound. This raises the question whether more effort should be made during the initial design phase.

There needs to be a new approach to housing design and construction that blends modern and traditional styles, technologies, and ways of living, insightfully and innovatively balancing urban aspirations with traditional domestic practices. Hybridisation is a promising step in this direction.

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LIGHTING AND SPATIAL COGNITION IN ENVIRONMENTAL DESIGN: INSIGHTS ON DEMOGRAPHIC VARIABLES AND SPACE PERCEPTION ACROSS DIVERSE LIGHTING PATTERNS

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INTRODUCTION

Lighting shapes spatial perception, making it a fundamental element in environmental design and architecture. Research shows that spatial perception is influenced not only by physical dimensions but also by lighting conditions. Studies reveal that lighting can significantly alter perceptions of a room. The light distribution into the space can make the room feel spacious or cramped, Collins.[1] Introducing more light into the room makes the room feel more spacious, Houser et al.[2] Inui and Miyata,[3] show that other factors related to spaciousness are sky luminance, interior illuminance and window size. Besides quantity, the location and distribution of the light impact the perception of spaciousness, Miyake et al.[4]

When it comes to light distribution, findings from Christoph et al.,[5] show that the perceived spatial layout of a given room is significantly influenced by the luminance of the direct bounding surfaces (e.g., the side walls when judging perceived width) but less affected by the luminance of the other surface. Earlier research by the same author found that ceiling luminance also impacts perception, stating that "the height matches showed that the light ceiling appeared significantly higher than the darker ceiling." This suggests that the influence of ceiling lightness on perceived height is more of a direct perceptual effect rather than a cognitive one. Findings from Mizuno and Yoshioka[6] show that ceiling height is evaluated higher when the downlights are distributed than when they are gathered in the centre in the middle. Meanwhile, findings from Rahmatia and Koyama[7] show that the type of lighting pattern can also impact width and depth perception; a grid pattern can enhance depth perception, and a linear horizontal pattern can enhance the width dimension. However, Wänström-Lindh and Billger[8] suggests that "illuminated walls increase spaciousness. Yet, darkness impacts the perception of spaciousness as well. Both compound and separated light zones can expand depth, height, or width, depending on the interpretation of these patterns of light seen in relation to the whole spatial context.".

Understanding how different groups perceive space under varying lighting conditions is essential in today's increasingly globalised and culturally diverse environments. Previous studies have noted regional and cultural differences in lighting preferences and perception. For example, Chamilothori et al.[9] note that Greek participants perceived the same lighting conditions as brighter than Norwegian

participants, indicating cultural or regional variation in brightness perception. Similarly, Park et al.[10] reported that light intensity preferences could vary significantly across different cultural groups. Another study by Martyniuk-Pęczek et al.[11] confirmed these findings with two distinct cultural groups, Dutch and Chinese, highlighting how cultural contexts shape individual lighting preferences and experiences. Yet, the existing literature fails to show how these factors interact with specific lighting configurations to influence spatial perception.

This study is part of broader research on how lighting patterns affect spatial perception in enclosed spaces and examines how these changes reflect across different demographic groups. It uses the same dataset as a previous study, Gjata,[12] which analysed spatial perception among 42 participants by gender. However, this study specifically focuses on Japanese and Chinese participants (40 in total) to identify unique perceptual patterns, including differences between sub-groups divided by sex.

The study re-analyses general responses to detect deviations from the entire dataset. Further, it explores intra-group and inter-group differences in how these participants perceive rooms under different lighting settings. By concentrating on these culturally distinct groups and sub-groups, the study provides insights into optimising lighting for diverse demographics. Additionally, it includes gender-specific analyses to offer a nuanced understanding of how lighting influences spatial perception, an often-overlooked area. This detailed examination allows a more comprehensive understanding of how different lighting patterns affect spatial cognition among various demographic groups.

In conclusion, this paper delves deeper into how spatial cognition under different lighting settings varies among cultural and gender-based groups, complementing the previous findings without overlapping and providing insights that could inform the design of culturally and biologically sensitive environments.

METHODOLOGY

This study used a structured experimental design to examine how different lighting configurations affect spatial perception among Japanese and Chinese participants. Digital room simulations with varying lighting patterns were employed to assess their impact on perceived room dimensions.

Participants

The sample included 40 participants from a prior dataset, evenly split between 20 Japanese and 20 Chinese individuals aged 18-25, with equal numbers of males and females per group. This balanced distribution ensured a thorough exploration of cultural and gender influences.

Experimental Design

The experiment involved digital simulations of rooms (7m x 7m x 2.7m), each illuminated by one of four lighting patterns: central, alternated, grid, and linear. Lighting was standardised at 750 lux and a 6000K colour temperature Figure 1.

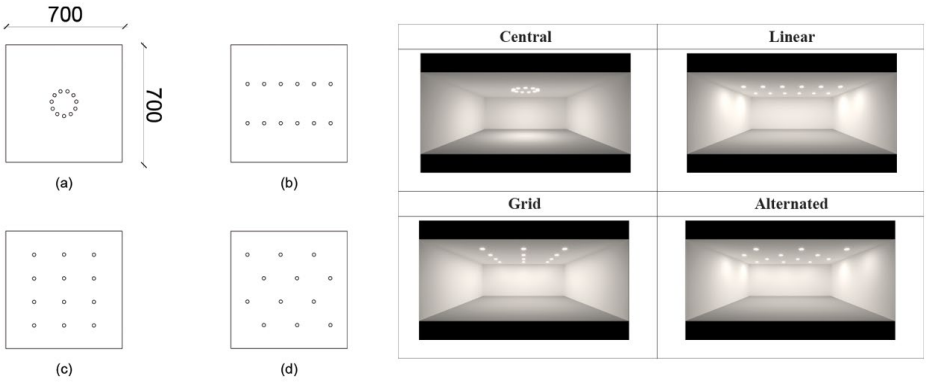

Figure 1. Experimental design and stimulus. Room's plan and lighting pattern layouts

The lighting patterns were chosen based on prior research indicating their significant impact on perceiving depth, width, and height. Simulations were created using Rhino 7 and rendered with Vray, keeping other variables like room size and light intensity constant across all conditions.

Procedure

As in the previous study, Gjata,[13] participants observed simulated rooms in pairs and evaluated their perceived dimensions using an eleven-point semantic bipolar scale. This scale measured perceptions of depth, width, and height, quantifying how each lighting pattern influenced spatial cognition compared to the same room with a different lighting pattern. Each participant evaluated six pairs in a randomised order to control for order effects, followed by a re-evaluation with the rooms switched to ensure consistency.

Data Analysis

First, the data were cleaned to remove outliers. Descriptive statistics and Two-Sample T-tests were then performed to extract mean values, standard deviations, 95% confidence intervals (lower and upper), and p-values. Next, gender was added as an independent variable, and the same statistical analyses were conducted. A paired Mann-Whitney U test was performed to examine group differences. Finally, the analyses were repeated with "sex by nationality" as an independent variable to identify more nuanced intra-group and inter-group differences.

RESULTS

A general analysis was conducted to determine if changes in the number of participants from the previous study, Gjata,[14] would yield consistent results or differ. This analysis re-evaluated a subset of the data, focusing on Japanese and Chinese participants to check for consistency or deviations, later aiding in interpreting group-specific results.

General Analysis

The results of the general analysis align with those of the previous study, Gjata.[15] It showed statistical significance in seven comparisons: Central vs Alternated – Width, Linear vs Grid – Depth, Linear vs Grid – Width, Linear vs Grid – Height, Grid vs Alternated – Depth, Grid vs Alternated – Width, and Central vs Linear – Width. The only difference was in the Grid vs. Central comparisons for width and height; previously near-significant p-values ($0.05 < p < 0.10$) were larger in this analysis.

The Grid pattern produced statistically significant results for depth compared to Linear and Alternated patterns and for height compared to Linear.

Compared to Central and Grid, Linear and Alternate patterns enhanced width in two cases. Still, their direct comparison showed a mean score slightly above the neutrality threshold of 6, which marks the neutrality threshold, leaning towards the Linear pattern but not showing statistical significance.
The Central pattern showed no significant results; the mean scores leaned toward it in three cases but with marginal differences from the neutrality threshold (mean = 6). Table 1 shows the results of this analysis. Statistically significant outcomes ($p < 0.05$) are highlighted in bold and marked with an asterisk (*).

Comparison	Dim.	Mean	STD	95%_CI_Lower	95%_CI_Upper	P-value
Central_vs_Alternated	Depth	5.95	1.779	5.399	6.501	0.859819
Central_vs_**Alternated***	**Width**	**6.36**	**0.974**	**6.061**	**6.664**	**0.023705***
Central_vs_Alternated	Height	6.15	1.116	5.804	6.496	0.400603
Linear_vs_**Grid***	**Depth**	**7.38**	**1.543**	**6.897**	**7.853**	**0.000002***
Linear*_vs_Grid	**Width**	**4.74**	**1.446**	**4.290**	**5.185**	**0.000002***
Linear_vs_**Grid***	**Height**	**6.55**	**1.560**	**6.067**	**7.033**	**0.031579***
Grid_vs_Central	Depth	5.59	1.732	5.051	6.124	0.139971
Grid_vs_Central	Width	6.36	1.349	5.944	6.781	0.097234
Grid_vs_Central	Height	5.69	1.304	5.283	6.092	0.137748
Alternated_vs_Linear	Depth	5.76	1.062	5.433	6.092	0.165219
Alternated_vs_Linear	Width	6.13	0.860	5.858	6.392	0.363859
Alternated_vs_Linear	Height	5.95	1.018	5.635	6.265	0.757683
Grid*_vs_Alternated	**Depth**	**5.28**	**1.536**	**4.799**	**5.751**	**0.004866***
Grid_vs_**Alternated***	**Width**	**6.88**	**1.049**	**6.550**	**7.200**	**0.000005***
Grid_vs_Alternated	Height	5.84	0.977	5.535	6.140	0.299093
Central_vs_Linear	Depth	5.90	1.307	5.495	6.305	0.631109
Central_vs_**Linear***	**Width**	**6.83**	**1.135**	**6.473**	**7.177**	**0.000044***
Central_vs_Linear	Height	6.10	0.935	5.810	6.390	0.502797

Table 1. Descriptive analysis results

Comparison by Nationality Analysis

When considering nationality as an independent variable, more nuanced results emerged. Japanese participants' responses generally aligned with the general analysis, with some subtle differences. In the general analysis, "Central vs. Alternated – Width" showed statistical significance, but this was not observed for the Japanese group. However, as shown in Table 2, it is marked as near significance, along with "Grid vs. Central – Height," as their p-values are close to $p<0.05$ and warrant further investigation. "Grid vs. Central – Depth" also requires further exploration, as its mean deviates from the neutrality threshold of 6 despite its p-value being far from significant. The only differing result was "Alternated vs. Linear – Depth," where Japanese participants perceived the Alternated pattern as enhancing depth, showing statistically significant results.

In contrast, Chinese participants showed less variation. Statistically significant results were observed only in “Linear vs Grid – Depth”, “Linear vs Grid – Width”, “Grid vs Alternated – Width,” and “Central vs Linear – Width”, all aligning with the general analysis. Minor differences appeared in “Grid vs. Alternated – Depth,” which was statistically significant in the general and Japanese results but near significant here. Meanwhile, “Linear vs. Grid – Height” and “Alternated vs. Linear – Depth” displayed a mean value of 6, indicating no perceived difference between rooms in their respective dimensions under these lighting patterns.

Comparison	Dim.	Mean	STD	95%_CI_Lower	95%_CI_Upper	P-value
Japanese						
Linear_vs_**Grid***	Depth	7.68	1.444	6.999	8.351	0.000053
***Linear**_vs_Grid	Width	4.88	1.580	4.135	5.615	0.004885
Linear_vs_**Grid***	Height	7.10	1.691	6.309	7.891	0.008980
***Alternated**_vs_Linear	Depth	5.53	0.850	5.127	5.923	0.021822
***Grid**_vs_Alternated	Depth	5.15	1.647	4.379	5.921	0.032430
Grid_vs_**Alternated***	Width	6.93	1.042	6.437	7.413	0.000822
Central_vs_**Linear***	Width	6.90	1.392	6.249	7.551	0.009340
Central_vs_Alternated	Width	6.40	0.995	5.934	6.866	0.088031
Grid_vs_Central	Depth	5.43*	1.942	4.516	6.334	0.201111*
Grid_vs_Central	Height	5.50	1.147	4.963	6.037	0.066170
Chinese						
Alternated_vs_Linear	Depth	6.00	1.214	5.432	6.568	1.000000
Linear_vs_Grid	Height	6.00	1.225	5.427	6.573	1.000000
Linear_vs_**Grid***	Depth	7.08	1.616	6.319	7.831	0.007791
***Linear**_vs_Grid	Width	4.60	1.324	3.980	5.220	0.000146
Central_vs_**Linear***	Width	6.75	0.835	6.359	7.141	0.000738
Grid_vs_**Alternated***	Width	6.823	1.079	6.320	7.330	0.002884
Grid_vs_Alternated	Depth	5.40	1.447	4.723	6.077	0.079335

Table 2. Descriptive analysis by nationality

The mean values for each group, compared to each other and the general analysis, are shown in the interaction plot in Figure 2.

Figure 2. Interaction plot of nationalities groups and general mean values

Cross Nationality Analysis

To examine intra-group differences, we performed a pairwise Mann-Whitney U_test. No significant differences were found, except for "Linear vs. Grid – Height," which had a near-significant p-value of 0.052, suggesting it warrants further investigation.

Comparison by Sex within Nationality Analysis

Dividing data by sex within each nationality revealed more nuanced results. None of the pairs showed statistically significant differences across all four groups. Statistically significant values ($p < 0.05$) are listed in Table 3. Near-significant values are highlighted in red, and those with no perceived difference ($p = 1$, mean = 6) are in blue.

Comparison	Dim.	Mean	STD	95% CILower	95%_CI_Upper	P-value
Japanese_Male						
Central_vs_**Alternated***	Width	6.60	0.810	6.021	7.179	0.043776
Linear_vs_**Grid***	Depth	7.65	1.292	6.726	8.574	0.002936
***Grid**_vs_Alternated	Depth	5.00	1.333	4.046	5.954	0.041792
Linear_vs_Grid	Height	7.00	1.633	5.832	8.168	0.084785
Central_vs_Linear	Width	6.85	1.355	5.881	7.819	0.078594
Japanese_Female						
Central_vs_Alternated	Depth	6.00	2.160	4.455	7.545	1.000000
Linear_vs_**Grid***	Depth	7.70	1.653	6.517	8.883	0.009971
Linear_vs_Grid	Width	4.85	1.334	3.895	5.805	0.023403
Grid_vs_Central	Depth	4.80	1.549	3.692	5.908	0.036787
***Alternated**_vs_Linear	Depth	5.25	0.979	4.550	5.950	0.038439
Alternated_vs_**Linear***	Width	6.40	0.516	6.031	6.769	0.036787
***Alternated**_vs_Linear	Height	5.10	1.022	4.369	5.831	0.021232
Grid_vs_**Alternated***	Width	7.25	0.950	6.570	7.930	0.002447
Linear_vs_Grid	Height	7.20	1.829	5.892	8.508	0.067812
Grid_vs_Alternated	Depth	5.30*	1.975	3.887	6.713	0.291348
Central_vs_Linear	Width	6.95	1.499	5.878	8.022	0.076059
Chinese_Male						
Central_vs_**Alternated***	Width	6.60	0.738	6.072	7.128	0.030117
Central_vs_**Linear***	Width	6.80	0.789	6.236	7.364	0.010708
***Linear**_vs_Grid	Width	5.15	1.180	4.306	5.994	0.048681
Linear_vs_Grid	Depth	6.75	1.799	5.463	8.037	0.219931
Alternated_vs_Linear	Height	6.70	1.135	5.888	7.512	0.082993
Grid_vs_Alternated	Width	6.60	1.174	5.760	7.440	0.140453
Chinese_Female						
Linear_vs_**Grid***	Depth	7.40	1.430	6.377	8.423	0.012799
***Linear**_vs_Grid	Width	4.05	1.279	3.135	4.965	0.000946
Grid_vs_**Central***	Width	6.95	1.189	6.099	7.801	0.032422
***Central**_vs_Linear	Depth	5.10	1.125	4.295	5.905	0.032300
Central_vs_**Linear***	Width	6.70	0.919	6.043	7.357	0.039322
Grid_vs_**Alternated***	Width	7.05	0.985	6.346	7.754	0.008227
Grid_vs_Alternated	Depth	5.05	1.423	4.032	6.068	0.063954

Table 3. Descriptive analysis when divided in sex by nationality

Figure 3 shows interaction plots of mean values, illustrating the relationship between each group and the general analysis results.

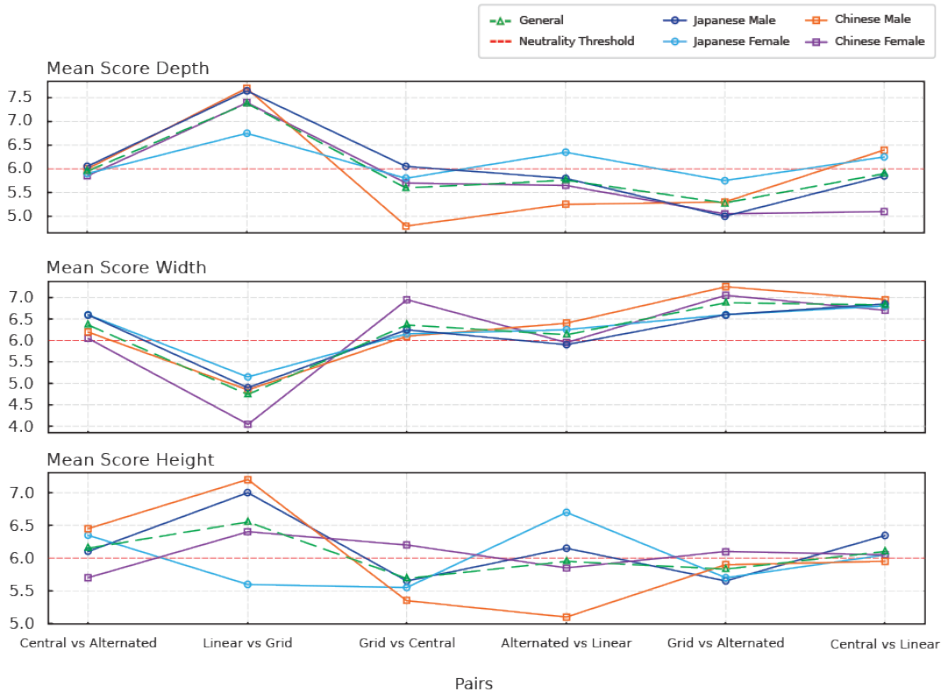

Figure 3. Interaction plot of nationalities groups and general mean values

Cross-Sex by Nationality Analysis

To examine inter- and intra-group differences, a pairwise Mann-Whitney U_Test was conducted. This test revealed significant, near-significant, and similar perceptions of room dimensions among different gender and nationality groups under various lighting conditions.

Height Dimension: Significant differences were found, especially among Japanese females compared to male groups (both Chinese and Japanese) in “Linear vs. Grid” and “Alternated vs. Linear,” indicating greater sensitivity to height changes. A near-significant difference was noted between Chinese and Japanese males ($p = 0.077$). Japanese and Chinese males showed consistent height perceptions in “Grid vs. Central” and “Grid vs. Alternated.”

Width Dimension: There were significant differences between Chinese females and males in “Linear vs. Grid” ($p = 0.033$). Consistencies in width perception were mainly found between male groups in “Central vs. Alternated”, “Grid vs Central”, and “Grid vs Alternated”. For “Central vs. Linear,” Japanese and Chinese males and females showed in-group consistency.

Depth Dimension: Only one significant difference was found within the Chinese group (males vs. females) in “Central vs. Linear.” A near-significant difference between Chinese and Japanese females ($p = 0.065$) suggests potential cultural influences. Consistent depth perceptions were observed in “Central vs. Alternated” among Chinese participants and “Grid vs. Alternated” among Japanese males and Chinese females.

The significant results from this test are summarised in Table 4.

Comparison	Dim.	Group_1	Group_2	U_Stat.	P-value
Significant difference in perception					
Linear_vs_Grid	Width	Chinese_Female	Chinese_Male	78.0	0.033183
Linear_vs_Grid	Height	Japanese_Female	Chinese_Male	78.0	0.035708
Alternated_vs_Linear	Height	Japanese_Female	Japanese_Male	81.5	0.010211
Alternated_vs_Linear	Height	Japanese_Female	Chinese_Male	15.0	0.007564
Central_vs_Linear	Depth	Chinese_Female	Chinese_Male	79.0	0.027050
Comparison	Dim.	Group_1	Group_2	U_Stat.	P-value
Near statisticaly significant difference					
Linear_vs_Grid	Height	Japanese_Male	Chinese_Male	73.5	0.076924
Central_vs_Linear	Depth	Japanese_Female	Chinese_Female	74.5	0.065141
No difference in perception					
Central_vs_Alternated	Depth	Chinese_Male	Chinese_Female	49.5	1.0
Central_vs_Alternated	Width	Japanese_Male	Chinese_Male	50.5	1.0
Grid_vs_Central	Width	Japanese_Male	Chinese_Male	50.5	1.0
Grid_vs_Central	Height	Japanese_Male	Chinese_Male	49.5	1.0
Grid_vs_Alternated	Depth	Japanese_Male	Chinese_Female	50.5	1.0
Grid_vs_Alternated	Width	Japanese_Male	Chinese_Male	49.5	1.0
Grid_vs_Alternated	Height	Japanese_Male	Chinese_Male	50.0	1.0
Central_vs_Linear	Width	Japanese_Male	Japanese_Female	49.5	1.0
Central_vs_Linear	Width	Chinese_Male	Chinese_Female	50.0	1.0

Table 4. Mann-Whitney_U_Test cross-sex by nationality results

CONCLUSION

The general analysis results were largely consistent with the previous study, Gjata,[16] affirming their reliability. Seven comparisons showed significant results, confirming that specific lighting patterns like the Grid affect depth and height perception, while Linear and Alternated patterns enhance width. The only deviation was in the Grid vs. Central comparisons for width and height, with no significant results. Overall, the Central pattern remained neutral across all dimensions, suggesting a consistent spatial perception influenced by specific lighting setups.

Considering nationality as an independent variable revealed nuanced results, indicating cultural background may influence spatial perception. The Japanese group's responses mostly aligned with the general analysis, except for "Alternated vs. Linear – Depth." In contrast, Chinese participants showed less variation, especially in height, where mean values were near the neutrality threshold. This suggests that Japanese participants are more sensitive to lighting changes than Chinese. Minor differences hint at subtle cultural influences. While nationality plays a role, these slight variations warrant further investigation with more diverse groups.

The cross-nationality analysis using the Mann-Whitney U Test found few significant differences between groups, except for "Linear vs. Grid – Height," which approached significance. Most comparisons showed uniform perceptions across nationalities, suggesting a shared understanding of spatial perception under specific lighting conditions. However, the cultural and geographic proximity of the groups calls for caution in interpreting these results; more diverse groups are needed for validation.

Dividing data by sex within each nationality revealed more nuanced differences. No pairs showed significant results across all groups. Japanese females showed the most variation, with seven significant results in depth and width and three near-significant results. The Chinese female group followed, with six significant results in width and depth and one near-significant result. Both male groups had only three significant results, highlighting that gender differences depend on specific conditions, lighting, and spatial dimensions. These findings emphasise the complexity of spatial perception influenced by cultural and biological factors, suggesting further detailed exploration.

Analysis of inter- and intra-group differences by sex and nationality revealed several significant and near-significant differences in spatial perception. Japanese females were more sensitive to height changes compared to males. Within the Chinese group, width and depth perception differences were observed between males and females in one instance each. However, consistent perceptions across various comparisons suggest that specific lighting patterns evoke similar spatial responses across groups, highlighting diversity and commonality in spatial perception.

This analysis shows that while gender differences, particularly among females, significantly impact spatial perception, many instances exist where groups perceive light and space similarly. Height is the most variable dimension, especially among Japanese females, while width and depth show differences and consistencies across groups. These findings underscore the need to consider differences and commonalities when designing lighting environments.

SUGGESTIONS FOR FURTHER STUDIES

Future research should conduct more detailed analyses of cultural and gender influences on spatial perception under various lighting conditions, including more diverse cultural and geographic groups. Additionally, exploring psychological and contextual factors contributing to these perceptual differences could help design more inclusive environments. Further examination of the near-significant discrepancies found in this study could identify thresholds where perceptions diverge, offering a more nuanced understanding of spatial cognition.

NOTES

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A "PEOPLE'S METAVERSE" APPROACH TO PLACE-BASED STORYTELLING: USING NEW TECHNOLOGIES TO ENABLE MULTIPLE PERSPECTIVES AND INCLUDE OMITTED NARRATIVES

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INTRODUCTION

This paper accompanies the co-authored video presentation of the same name.[1]
It shares insights and learnings from StoryTrails 2022 Immersive Storytelling project- a multi-partner endeavour delivered in libraries and public spaces across 15 UK towns and cities using new technologies to explore feelings of connection between people and their shared geographies. The authors highlight their development towards a next iteration including exploratory models of partnership, and prototypes designed to democratise creative access to storytelling with 3D/mixed reality technologies. They also discuss how design principles might underpin an inclusive mixed-reality public space, making possible what Professor James Bennett refers to as "a people's metaverse".[2]

STORYTRAILS 2022

StoryTrails 2022 was funded by the UK government and led by our team at StoryFutures.[3]
In developing StoryTrails, we were interested in history and storytelling refreshed by technology; developing new interactive storytelling forms and ways of experiencing history where it happened using archive in new ways, engaging the audience as protagonist, and in responding to historian and broadcaster David Olusoga's call to reopen the history books and address missing chapters as part of a "radical reappraisal of the parameters of history".[4]

The partnership framework

The project brought together 7 strategically chosen partners. These included David Olusoga who lent his vision; archive partners BFI and BBC who gave access to their national treasures; technical partners, ISO Design and Nexus Studios who helped develop and deliver creative outputs; and The Reading Agency who facilitated our access to 15 libraries across the UK - providing connection to local communities and an exhibition site in each town for the StoryTrails 2022 summer tour.

New voices, untold stories

We wanted to explore what would happen if you put new technology into the hands of the public. Could the way people engage with local history and their heritage – and the stories we tell about the places we live - be different? Our project tagline "see your town differently" referenced not only the ways in which technology might offer new ways of seeing, but also the idea of seeing through the multiple perspectives of local people.

In his 2020 lecture at Edinburgh TV festival, David Olusoga laid bare the diversity crisis within our creative industries after "30 years of failed initiatives" and continued marginalisation of "non-white producers and directors" which "risks inhibiting our industry's ability to tell a wider range of stories".[5] We took this seriously within our inclusion strategy, devising a recruitment campaign to attract 50 regional creatives from diverse backgrounds.

	All applicants	**Appointed**	% Population
Female	57%	**51%**	50.59%
Male	43%	**37%**	49%
Prefer to self-define gender identity or prefer not to say	tbc*	**12%**	No official data
Black, Asian and minority ethnic	32.3	**36.4%** **Asian 12.1%, Black 7.3%,** **Mixed ethnicity/other 17%**	13.1% All Asian 7.5% Black 3.4% Mixed 2.2% Other 1%
Disabled	18%	**19.5%**	18%
Working class	15.5%	**19.5%**	30-35%

Table 1. Applicants/appointments vs population

They were embedded in their communities and supported to give rise to and amplify local voices and stories which were un/under-represented.

The technology

To facilitate wide participation, we opted for technology that was accessible; smart devices such as tablets and mobile phones, audio recorders and a range of mobile apps.

The two major strands of work were:

Maps

"Emotional 3D maps"- hyper-local immersive cinema experiences for each of the 15 towns featuring 100s of local stories on peoples' connection to their town and each other.

In service of our aims to enhance connection to place, these were made up of 3D scans –which enable representations of the physical world to be transported into virtual space- layered with audio testimony.

Trails

A collection of Mobile Augmented Reality walking trails unravelling narratives of previously uncelebrated people and hidden histories.

These enabled audiences to be in the real world while experiencing digital content layered onto it. They were experienced through a free mobile app, developed with partners Niantic - creators of *Pokemon Go!*.

Place based Storytelling

We were interested in the power of place – in how it might connect people and give them a sense of belonging and rootedness, and the ways in which it can be seen to contain historical meaning.
This was underlined by David Olusoga who quoted fellow historian G.M, Trevelyan:
"The poetry of history lies in the quasi-miraculous fact that once, on this earth, once, on this familiar spot of ground, walked other men and women, as actual as we are today, thinking their own thoughts, swayed by their own passions, but now all gone, one generation vanishing into another, gone as utterly as we ourselves shall shortly be gone, like ghosts at cockcrow."[6]
It guided our approach to place-based storytelling, and our focus on first-person experiences of the past, of discrete moments capturing individual perspectives of "actual" people who shared those "familiar spots". We developed a series of design principles for each of the creative strands to support this.

Design Principles

We were working at scale to deliver a collection of bespoke experiences for each of the 15 towns as the stories and content were hyperlocal. We were also working with creators with diverse skillsets, from artists and community storytellers, to roles in games, film, and TV. Design principles and a framework were critical in enabling the creatives to generate cohesive public-facing outputs within a tight timeframe and budget. They gave the project an identity and user interface, meaning audiences could recognise and navigate the experiences whether in Bradford or Brixton. More practically, they enabled efficiencies in the training and production of 50 creatives and their outputs.

Something borrowed

There were no obvious precedents or projects to refer to using these technologies at scale. As we developed design principles, we therefore drew on a range of established media and arts practices; for example, using a recognisable 3-act structure of inciting incident, rising action (or drama) and resolution in the narrative of the trails.[7]
Drawing on Format Television[8] we leant into the 3 R rule of relatable, recognisable and repeatable. This helped us map out a trail 'format'. Trails were 6 stops (locations) long, starting and ending at the library. Each stop, or scene, was a 2-3 minute experience using a set number of digital assets drawing from audio, video or stills. Each was driven by a script, building-in cliffhangers for example, to entice the audience to want to 'hot foot it to the next stop' and to the next chapter.
Audience involvement was key to developing new interactive story forms, and here is where we drew on immersive theatre (popularised in the UK by companies such as Secret Cinema[9] and Punchdrunk[10]) and design principles for audience, giving them a relatable role or scenario to play out using first-person scripting to guide them. For example, "You've got the job, you're a roadie for rising star Winifred Atwell – better learn to tune her piano and follow her on tour" or, "you're here for your coronation – better find out what qualities you need from past "Queens" of Dumfries".

Something new

Equally we had to develop our own bespoke design principles. Given the focus on omitted narratives, we felt it important to authenticate un/under-represented stories with testimony from people with a personal connection to the story. While respecting the historian view, we were keen to move away from authoritative perspectives, instead platforming multiple perspectives from those with first-hand experience.
A key feature was for visitors to be able to experience history where it happened, so we needed ways of mapping story to place. We explored new methods of bringing past stories to life in 3D, such as

placement of 3D objects, clever use of relevant archive played at scale, or use of stills enhanced with audio as ways of immersing the visitor in the past. For example, we sited archive footage of Winifred Atwell's hair salon on the wall of the building in which it once stood.

If we couldn't reach a location due to its physical distance from the library, our design principles included the possibility of scanning that location and 'recreating' it within the trail boundaries. 3D scanning also opened possibilities for transplanting digital objects, for example a 3D scan of Atwell's original piano.

Innovating with film archive was another project mission, and here we experimented with machine learning to extrude it and make it feel 3D. This was only partially successful as the effect was often unstable when played through an app on a mobile phone. AI advances will make this more possible in the future.

There were different design principles for the "emotional maps" which comprised 100s of stories made up of 3D scans and audio testimony. Here traditional radio journalism principles were applied, and short form narrative construction using clear beginnings, middles and ends. The 3D scans could comprise people, objects or places. Using the principles of a modular build (leaning into architecture and world building) story scenes were constructed which were knitted into a larger, multi-story representation of the town or city.

These design principles were outlined and shared via project handbooks.

Cohort Training and Partnership support

StoryTrails adopted a tried-and-tested cohort training model used in R&D programmes by StoryFutures, one that brings together interdisciplinary skills to encourage knowledge-share, peer support and teamwork to deliver accelerated solutions to complex challenges.[11] Our 50 creatives were supported through training and mentorship throughout.

LEARNING FROM OUR AUDIENCE

The project reached 1.3 million people and won several awards.[12] The audience insight team evidenced that 60% of visitors reported StoryTrails made them feel proud of their city by revealing "the wonderful people and wonderful stories you should be proud of". People reported a 20% increase in sense of belonging to their town, with one respondent capturing the experience as: "Being merged with different people … different cultures. …where everyone can express themselves freely. So, yeah, I do feel like I belong here, I really do and StoryTrails has furthered that".

While the ambition for participatory features was high, stickiness and friction of the new tech proved an obstacle. One promising element of the trails for example was a "Hope Note" mechanic – a virtual typewriter which would appear within the narrative to prompt the public to contribute their own thoughts in relation to the story being told, establishing some semblance of shared experience. It was inspired by Lucas Rizzotto's VR experience *Where Thoughts Go*, described by one reviewer as "entering inside the hearts of people, and discovering that in the end, it is our heart".[13] In our case, the tech proved too nascent to achieve this successfully.

The appetite for participation and for story contributions was evident. An activity called 'Big Me Little Me', originally devised as a way of training librarians in 3D scanning, became a particular highlight. It involved Librarians 3D scanning visitors – or a visitor scanning another – and creating a screenshot/photo of the virtual and physical person together.

Figure 1. Example Big Me Little Me screenshot

During the legacy period, several of the 909 trained librarians were dedicated to exploring ways of taking the 'Big Me Little Me' idea further. They reported a desire to continue to develop their new skills and to serve their highly mobilised communities, making use of the suite of iPads and phones left behind by the project. This opened our eyes to the onward possibilities of creating with accessible technologies and led to us developing 'Easy Dioramas' – a simplified version of our 'Emotional Maps' pipeline.

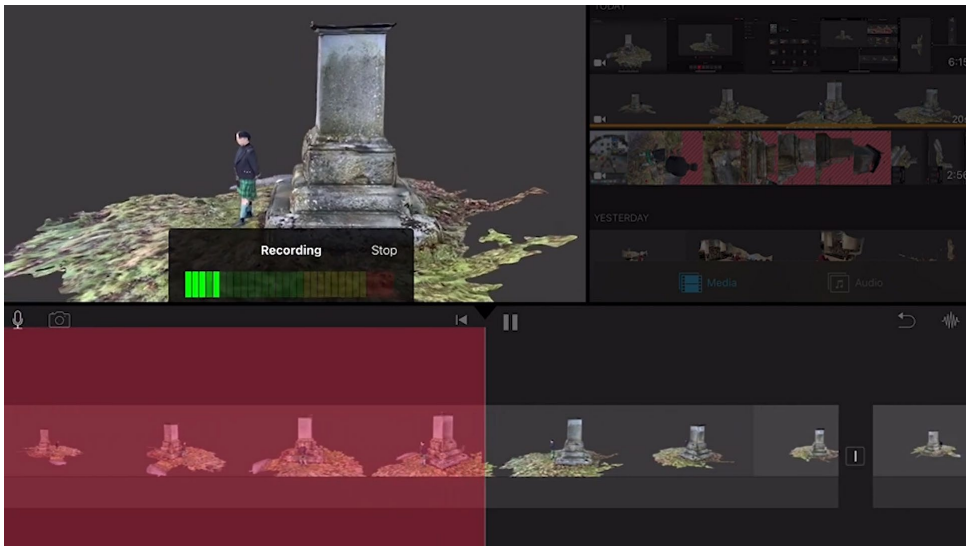

Figure 2. Screenshot showing oral testimony being recorded directly onto rotating 3D scan

Brixton library adopted it immediately to capture and share the stories of an ageing Windrush generation within their community.

ONWARD DEVELOPMENT

These library-led projects, along with the rise of AI making immersive tools easier to use, gave us momentum to draw in our in-house tech team to help further ways in which audiences – as well as librarians – could become creators. How best could we facilitate bigger numbers to participate in building a 3D, mixed-reality experience which could grow over time. While the tech teams started to develop a prototypes, we explored a new partnership model to address the capacity pressures faced by library teams.

It takes a village

We were aware that a new model that encouraged greater public participation in the creation and exhibition process, would need the support of a wider ecosystem. Libraries alone could not carry it. We explored a new partnership model, first modelling it in Blackpool where there was an appetite to take this further, including the local cultural ecology of a museum, theatre, several archive houses, community groups, the library and the district council. They were excited, highlighting the benefits of access to cutting edge academic research and new technologies, from knowledge share and skills development including 'trainer' skills and importantly, the ability to develop innovative ways of reaching new audiences critical to business growth.

They talked about the power of collaboration in the use of new technologies not just as a better way of serving their town and communities, but also as a more accelerated route to creating scalable creative works. Within this new model we also discussed the prospect of de-siloing existing archive, of developing an open access system that would allow communities to activate and celebrate archive in new 3D interactive works made up of the stories that matter to them one which forges "connection", not another collection for the dusty drawers!

New tech developments for a Future StoryTrails

Exploring what might be technically possible, our StoryFutures tech team built an AI assisted prototype that involved uploading personal photographs associated with a memory to a pipeline. It offered options to quickly upscale, colourise, and/or animate photographs in sync with oral testimony. It also used AI to assist with the creation of metadata (a key consideration for future searchability and curation) and mapped stories to location.

We trialled this prototype in a workshop with the new prospective partnership group in Blackpool, focusing on a story theme of interest to them, that of LGBTQ+ heritage at risk. It was met with excitement. Museum partners and archive holders were inspired by the potential to pioneer a new approach to participatory archive building. Local council representatives and affiliates saw strong potential for synergy with wider aims around digital inclusion and specific cultural strategies aimed at amplifying the visibility of LGBTQ+ heritage. Partners representing LGBTQ+ groups were excited by the potential to situate their own archive and stories as part of the town's shared story and loved the open-ended dialogic nature.

We also entered a conversation about practicalities associated with supporting the public to create their own mixed-reality/3D content, including storytelling aims, ethics and governance, curation and metadata, longevity and future use of stories submitted etc.

So is the future about collaboration and connection, not collection?

In respect of our aim to consider how any future iterations might work in support of Bennett's idea of a People's Metaverse, it is important to consider the difference between collection and connection. For example, the catalogue of stories presented as Emotional Maps within the StoryTrails 2022 project was a finite collection of stories with each storyteller having been approached individually by the creative, having their story captured in isolation of other stories collected. The basic practice of collecting stories from members of the public is one which is well-established. In heritage sectors, this is often referred to as "history harvesting" and involves a professional storyteller and/or historian putting out a call, gathering stories from members of the public, curating them and presenting them back to the public. Our proposed use of this new technology is to implement a method whereby audiences can contribute their own story responding to or in dialogue with other stories on display or starting a new story branch. So it's about building connections between stories, not just a collection of stories. We believe that interaction between members of the public is a key design principle in the production of public space.[14]

A catalogue that acts as a catalyst

The new model we are proposing, relies on some kind of starting point as inspiration and provocation. We are proposing the building of a small catalogue – much like a mini StoryTrails 'emotional map' story except it is open ended and has a connection point where new audience members can plug-in. See illustration below.

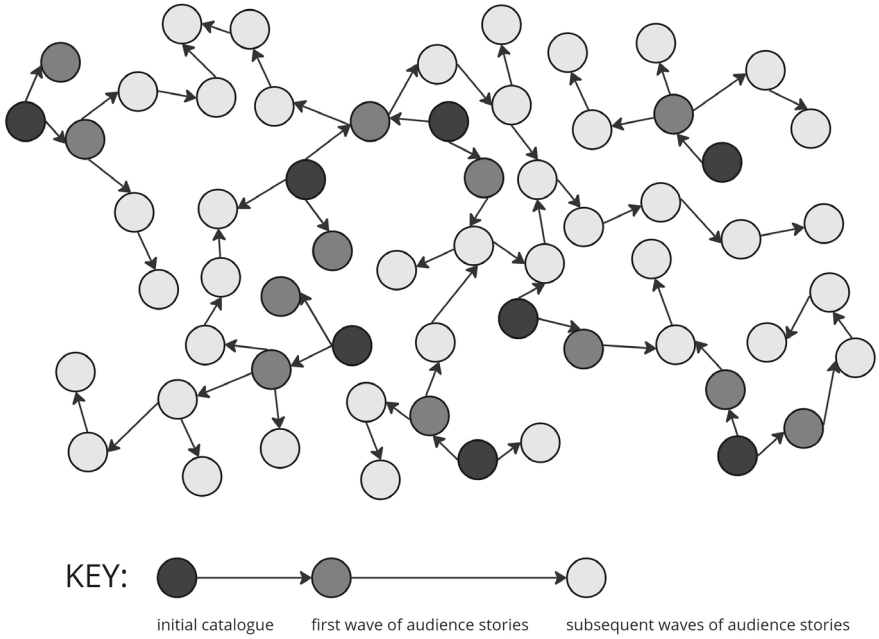

Figure 3. Stories connecting to the catalogue and to each other over time

With reference to our prototype pipelines, audience contributions would be made with a simple smart device, supported staff at partnership and public locations (museums, libraries, community centres etc. - see partnership model above).

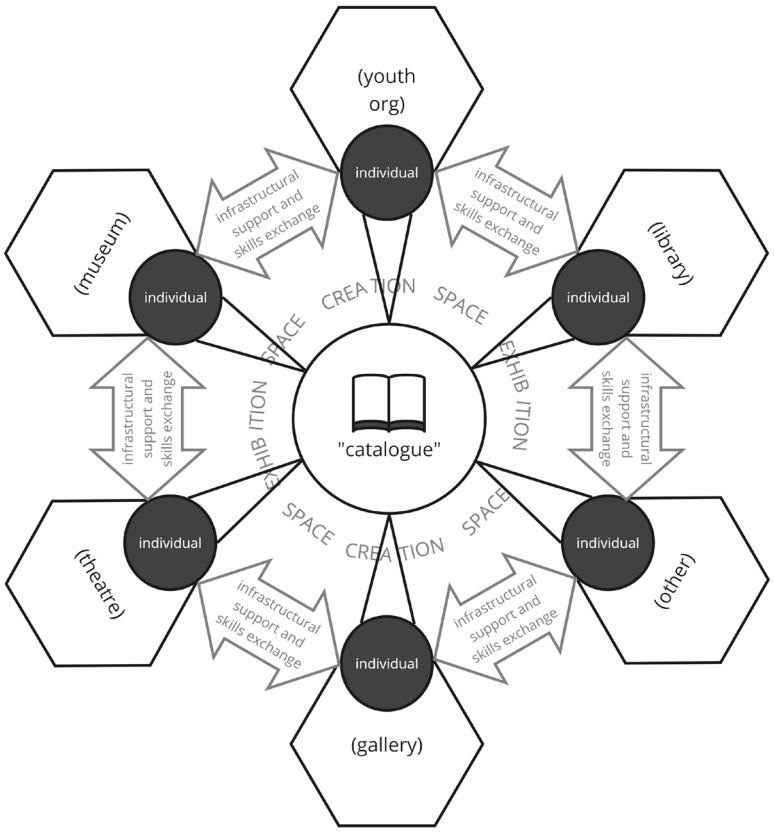

Figure 4. Place-based partner cohort supporting development of catalogue and onward engagement

Design principles for 'Catalogue Stories' include that they:
- offer a prompt or provocation for onward interaction (a 'catalyst')
- provide entry points for connection which consider broad audiences (for example we too were once in that place, or experienced something similar, or knew someone connected)
- prioritise narratives which are un/under-represented in mainstream media
The last principle adheres to the mission of StoryTrails as led by Olusoga.

CONCLUSION

Inclusion must be at the heart of our experimental mixed-reality public spaces, or else we risk repeating the mistakes of the past. Those who create our public spaces shape who we are as a society, which is why it is critical to democratise creative access at formative stages.

Future work needs to be supported by a research agenda, policy and funding streams which can accommodate the development of prototypes and a new partner model. We have demonstrated the technological capability and have illustrated a potential set of design principles to help inform future endeavours. In creating a dynamic public space through scaffolded interactions, the public can situate their own story in relation to the story of at least one other.

We advocate for putting power in the hands of the people by building participatory pipelines which enable all people to create or engage using accessible versions of the technology which underpins the medium, supported by an ecosystem of partners who can intersect with each other in terms of audience reach, infrastructural support and shared learning, intertwining project activities with wider initiatives and strategies in support of wellness, prosperity and sustainability.

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THE EDUCATION OF YOUNG PEOPLE BASED ON DIVERSITY AND CULTURAL IDENTITIES AS A RESPONSE TO THE INEQUALITIES OF THE CULTURAL LANDSCAPE OF THE CITY OF SÃO PAULO.

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INTRODUCTION

Cultural activities in the city of São Paulo are as diverse as possible. Considering that it is one of the largest and most significant cities in Latin America, São Paulo and its 12 million inhabitants produce a lot of art and culture, in its most diverse media and forms of expression. Throughout the city of São Paulo, there is a broad production chain. A play, a show or a dance performance is not prepared the day before and only with those who perform on stage. Many professionals work in the entire structure necessary for any artistic presentation to take place. These gears enhance and keep the production chain in constant motion.[1]

The Itaú Cultural Observatory has released surprising data obtained through a methodology developed to measure the economic impacts of creative industries in Brazil. The country's culture and creative industries accounted for 3.11% of the Gross Domestic Product (GDP), totalling R$232 billion, which corresponds to a growth of 78% between 2012 and 2020.[2]

This is obviously happening unevenly across the city. The inequality map, produced by a Civil Society Organization called Rede Nossa São Paulo (in its latest version from 2023), allows us to present and map some of the inequalities that shape the experience in the capital of São Paulo. In terms of the presence of cultural spaces, the inequality map points to the divergences and inequalities in terms of access in the different regions of the city. The table below presents the main data and comparisons regarding access to culture in the city of São Paulo.[3]

Consider that the Indicator represents the type of equipment analysed. The city was divided into districts and the score refers to an equation that counts the total number of equipment / Total population of the district x 100,000. In many cases, the final index is 0, indicating a negligible or even non-existent number of cultural equipment in that district. Here are the numbers:

Indicator	Number of districts in the city	No. of districts that score	Maximum value	District with maximum value	Minimum value (among those that score)	District with minimum value	No. of districts that do not score
Cultural centers, houses and cultural spaces	96	39	0,81	República	0,03	Capão Redondo	57
Public cultural facilities	96	42	14,78	Sé	0,34	Jardim São Luis	54
Cinemas	96	19	0,19	Butantã	0,03	Capão Redondo	77
Independent cultural spaces	96	48	25,77	República	0,34	Jardim São Luis	48

Table 1. Indicators of access to culture in the city of São Paulo

The data reveal a situation of inequality, not necessarily in cultural production, but in access to cultural spaces and their programming. The most absent type of facility is the cinema, which is present in only 19% of the city's districts. In addition, when present, it is much lower than that of other types of cultural facilities. The districts of República and Sé, neighbouring the city centre, are home to a large part of the cultural facilities. And the neighbourhoods of Capão Redondo and Jardim São Luis, both in the southern part of the city, are at the bottom of the scoreboard (although we need to remember that they score points, given the number of districts that don't even manage to do so).
Access to cultural spaces for the population is therefore a major challenge for this megalopolis.[4]
It is in this context that the Jovem Monitor Cultural Program has existed in the city of São Paulo for the past 15 years. This initiative is supported by Municipal Law 14.968/09 and Municipal Decree 51.121/09 and provides for the training of young people aged 18 to 29 in the area of cultural production, a paid professional activity, over the course of two years. These young people work predominantly in public cultural facilities, which according to the data above; occupy about half of the city's districts.[5]
It is interesting to observe a public action like this. One might wonder why the young people were allocated to these 42 districts and not to the others, which are even more lacking in cultural action. The fact is that even the districts that have public facilities often find themselves in a very precarious situation in terms of technical and administrative staff to take care of the operation of the spaces. The young cultural monitors, in addition to supporting this type of demand (even if they are still in training), are also an essential part of the actions to strengthen these spaces and their interaction and relevance to the surrounding communities.
It is to talk about this program, its strengths and its challenges, as well as to think about how the formative nature of this action is a fundamental element to prevent the scrapping of cultural management in the city of São Paulo - and in this sense, the importance of the Higher School of Management and Public Accounts of the Court of Auditors of the Municipality of São Paulo in the training of these young people - that we developed this work.[6]

WHEN PUBLIC CULTURAL POLICIES MEET YOUTH

Public Cultural Policies, in their origins, were deeply related to the constitution of the identity of peoples and nations Although, as a systematic area of study, they were established in the 1970s, they certainly existed before this as a public action. This is what the authors point out in the article hat are cultural policies? A critical review of the modalities of state action in the field of culture. In it, the authors state: "Identity and heritage policies thus emerged long before other modalities of cultural policy, since they are a strategy adopted as part of the very construction of modern States". In other words, cultural policies are part of the process of constitution of modern States and are essential as a mechanism for the constitution of an identity for the peoples that make up the population of these States.[7]

Culture as a constitutive part of the identity of a people is what gradually demands other forms of representation of the same people that it intends to reflect. It is in a dialectical process, which continually guides and is guided, that diversities expand the hegemonic notions of culture, art and cultural production. This systematic process of thesis and antithesis was strengthened especially in the 1970s, with the UNESCO conferences that promoted the consolidation of public cultural policies as a field of thought and social action.[8]

The debates on modern cultural policies were first marked by the UNESCO conferences in the 1970s, in which a distinction was gradually consolidated at the theoretical level between two types of policies: policies for the democratization of culture and policies for cultural democracy. The former sought to expand access to the activities and products of elite culture, with the aim of democratizing it. The second type, then predominantly “theoretical”, sought, based on a “socioanthropological” conception of culture, to value and support popular cultural practices as well (as opposed to only those of high culture and mass culture promoted by the media).[9]

If the debate on cultural democracy appeared as "predominantly theoretical" in the early days of organized thinking on cultural policies, today it is the main trench that public cultural policies need to face. Cultural democratization is an urgent need, especially driven by young people who want to see and recognize themselves in cultural productions. When they are active in cultural spaces, this demand takes on the characteristics of executive power, that is, of an effective possibility of qualifying and diversifying the cultural programs hosted by public spaces.[10]

In other words, here we observe that a cultural action like the PJMC fulfills the perspective of providing the possibility of serious, quality professional initiation linked to the cultural field for young people from the outskirts of the city and also of ensuring that cultural spaces have staff with diverse views, experiences and perspectives on what is being produced in the territories where these young people were raised and where, through the PJMC, they now work professionally. The presence of young people in cultural management actions of public cultural spaces strengthens, in our perspective, the implementation of cultural democracy actions that, theoretically, emerged as an antithesis to the hegemonic culture of cultural democratization.[11]

THE YOUNG CULTURAL MONITOR PROGRAM (PJMC)

The Jovem Monitor Cultural Program, as already mentioned, is supported by a bill, and will be 15 years old in 2024. Today, serving around 350 young people per edition, the PJMC is a program run by the Municipal Department of Culture of the city of São Paulo (SCSP) in co-management with NGOs linked to education and culture (since 2023 in partnership with the Associação Educacional Maria do Carmo). Through interaction between the community and the cultural spaces of the Municipal Department of Culture of SCSP, the PJMC aims to stimulate, through cultural activities, socioeconomic inclusion and develop professional training and experimentation, as well as facilitate

the continuation of studies for low-income young people who have completed high school and who live in the city of São Paulo.[12]

We believe it is important to highlight how this is done. The young people have a workload of approximately 30 hours to be dedicated to the Program's activities, of which (i) 24 hours are what is called practical training, that is, acting as public agents in training in the public cultural spaces to which they have been assigned and (ii) 6 hours are dedicated to theoretical training, where the young people must approach topics related to culture, artistic productions and cultural management and topics related to the public good such as political science, public policies and law. In this encounter and dialogue between these two educational perspectives, the young people develop their training as cultural agents and public agents in the city.[13]

One of the highlights of the training offered by the PJMC is to guarantee the young people the opportunity to experience culture as a way of life, as a job capable of guaranteeing support for the young people and, often, for their families. Many of the young people who join the program have a career path that began as artists, but without much prospect of having their work in culture as their main means of subsistence. In the shift from producers to cultural managers, they experience possibilities that were not previously on their immediate horizon. In addition to receiving a scholarship and other benefits such as transportation, food and internet access, these young people are also guaranteed up to two years of theoretical training that will introduce them to public service, its characteristics and challenges.[14]

Public service is one of the most distant among the various possibilities for a young person to pursue a career in São Paulo. Although the PJMC does not guarantee a long-term professional relationship, thinking about public service and management contributes decisively to the education of these young people, not only during the period in which they are working as a young monitor (which is certainly true), but throughout their professional life, without a doubt. Any professional can adopt the ethics and posture of a public manager, whether working in the public or private sector. To talk a little more about how the PJMC uses the educational repertoire of the Higher School of Management and Public Accounts, we present the following topic.[15]

THE SCHOOL OF MANAGEMENT AND PUBLIC ACCOUNTS

The School of Management and Public Accounts of the Court of Auditors of the Municipality of São Paulo (EGC) was founded in 1996 and is a School of Government focused on training public servants and members of civil society. EGC is a free public school that promotes research, courses, events, publications and audio-visual materials in various fields of knowledge. EGC seeks the professional development of public servants in the city of São Paulo with courses in the areas of law and public management, but it also promotes training of the population for participation in public policies. In 2023, EGC had 9,646 people enrolled in its courses.[16]

In 2023, EGC began a partnership with the Department of Culture of the city of São Paulo. The main action of this partnership has been EGC's work in the PJMC. EGC provides part of its space for the theoretical training of young people. Furthermore, EGC teachers are responsible for 25% of the training of young people in technical subjects, such as financial mathematics, official writing, public law, public policies, economics and budget management. EGC contributes to training that prepares young people for the professional reality in the cultural area. The partnership between EGC and SCSP began with a pilot project in February 2023 and was formalized in August 2023 with a cooperation agreement.[17]

Between 2023 and July 2024, EGC offered 52 different courses to young people from PJMC. To welcome young people, EGC had to adapt. An internal evaluation with teachers recorded three important challenges of this partnership: 1) adapting the class content to the cultural area; 2)

understanding the social reality; 3) Developing a pedagogical language that is accessible to young people.[18]

The first challenge was to adapt the class topics to reflect issues in the cultural area. The content was focused on topics of interest in the area of culture. For example, the budget management content sought to analyse the public budget of SCSP, in financial mathematics, simulations of cost spreadsheets for a cultural production were made, and in economics, the main indicators of the cultural economy in Brazil were presented.

The second challenge is related to the social reality of the young people of PJMC. Most of these young people are from low-income families, are black or mixed race, and live in peripheral areas of the city of São Paulo. The EGC had to adapt a set of approaches to develop educational actions with these young people. This involved, for example, adapting desks and chairs in the classroom (to a circular layout, which favors dialogue and horizontal relationships, as opposed to the desks in rows model, which refers to the traditional school environment), changes in the internal dynamics of the School to welcome the young people (dialogues with the reception team so that they would recognize the young people of PJMC as the EGC's target audience), and the establishment of gender-neutral bathrooms. In addition, teachers had to develop their pedagogical content while being sensitive to the reality of these young people and, whenever possible, presenting elements of understanding reality, inequalities and social change. Thus, the training courses do not only cover technical content, but also include ethical, political and social elements.

The third challenge of the EGC was to use language that was attractive to young people. Teaching methods that prioritized participatory practices linked to active teaching methodologies were very useful for this. EGC teachers have prioritized the use of technological instruments, examples from the context of young people, activities that exercise the knowledge developed and encourage young people to express themselves during classes. As a result, the training courses have become more interactive and greater communication has been established between young people and EGC teachers. For EGC, this has been a two-way street, since there has been important institutional learning.

CONCLUSION

The Jovem Monitor Cultural Program has, as presented, made a significant contribution to the youth living in the city of São Paulo. Firstly, it offers paid professional training to young people who, primarily, live in peripheral areas of the city of São Paulo. This, in itself, already has a direct impact on the distribution and decentralization of income in the city of São Paulo by offering training and employment to young people in situations of social vulnerability.

This work also points to other benefits reaped by this public policy. By placing young people in action in the city's cultural spaces, spaces that they themselves often frequent as audiences, it encourages a greater presence of artists linked to these young people as part of the programming. This occurs due to the introduction of these artists by the young people to their managers and the contact they have with the attractions and productions of interest to this age group. Although this intergenerational dialogue between staff and young people is often difficult (and this is one of the many challenges in implementing this public policy), it reverberates as a provocation and update of the spaces' programming - which is very positive. In a complementary manner, and pointing to another strength of this public policy, the educational action of the Higher School of Management and Public Accounts at the PJMC promotes theoretical and reflective training on the role of a public servant, the importance of social participation, the history of public policies in Brazil, the laws related to public administration that every public servant should be aware of, among other training that contributes to young people's thinking about management and administration in the primary sector. By directly and decisively collaborating with the training of young people in these areas, the EGC strengthens the

public performance of the municipality through its agents, allows young people to also recognize themselves in these areas of training and to experience their citizenship in an even more present and qualified way.

However, it is equally important to also realize how this encounter between the EGC and the PJMC proved to be a two-way street. The encounter between young people and the EGC has led to the entire structure of this school being revisited and reconfigured. Young people from the outskirts of the city of São Paulo are now attending this space that is public, but that had not initially been designed for this specific profile of students. From the reception, the layout of the rooms and the methodologies used – everything ended up being, in one way or another, revisited and rethought to serve the young people. Moreover, we are certain that these changes have helped to ensure an even more plural and diverse public space.

We understand, through this work, that the PJMC as a public policy acts decisively in the cultural formation of the young people of the city of São Paulo. Its educational actions strengthen in these young people the spirit of social participation, critical sense and citizenship, and we believe they act decisively in mitigating the social abysses in which this city finds itself immersed. In addition, the presence of young people impacts (and shapes) the spaces where they are formed, causing a decisive impact of change and updating in these spaces as well.

NOTES

[1] About the characteristics of the city of São Paulo and its potential in cultural production see Cidade de São Paulo, “Cidade preserva riquezas culturais e de diversidade em 468 anos de sua fundação”, *Cidade de São Paulo*, January 25, 2022, acessed 25 August, 2024, https://www.capital.sp.gov.br/w/noticia/cidade-preserva-riquezas-culturais-e-de-diversidade-em-468-anos-de-sua-fundacao and also Gabriel Zanlorenssi and Mariana Froner, “Com mais de 12 milhões de habitantes, São Paulo completa 469 anos”, *Nexo Jornal*, January 24, 2023, acessed July 18, 2024, https://www.nexojornal.com.br/grafico/2023/01/24/com-mais-de-12-milhoes-de-habitantes-sao-paulo-completa-469-anos. About data on the cultural production chain in the city of São Paulo see Marília Marton, “O despertar criativo da cultura no Estado de São Paulo”, *SP Notícias*, June 23, 2023, acessed 14 July, 2024, https://www.saopaulo.sp.gov.br/artigos/o-despertar-criativo-da-cultura-no-estado-de-sao-paulo/. Additional information on the cultural production sector in Brazil see Junqueira, 219-226.

[2] About data on the cultural economy in Brazil see Observatório Cultural, “PIB da Economia da Cultura e das Indústrias Criativas: a perspectiva das Unidades Federativas”, *Observatório Itaú Cultural,* May 22, 2023, acessed July 04, 2023, https://www.itaucultural.org.br/observatorio/paineldedados/publicacoes/boletins/pib-da-economia-da-cultura-e-das-industrias-criativas-a-perspectiva-das-unidades-federativas

[3] Detailed data produced by the Rede Nossa São Paulo on inequalities in the city of São Paulo can be found on Rede Nossa São Paulo.

[4] See Assis, ‘Acessibilidade nos bens culturais imóveis’, Feitas, ‘Centros culturais públicos no Brasil’ and Botelho, Os equipamentos culturais na cidade de São Paulo.

[5] About the legislation of the Young Cultural Monitor Program see PJMC, “Home”, Programa Jovem Monitor/a Cultural, acessed June 29, 2024, https://jovemmonitorcultural.prefeitura.sp.gov.br/

[6] Details about the partnership between the Young Cultural Monitor Program and the Higher School of Management and Public Accounts can be found on EGC, “Jovens monitores culturais são diplomados”, Escola Superior de Gestão e Contas Públicas do Tribunal de Contas do Município de São Paulo*,* October 02, 2023, https://escoladecontas.tcm.sp.gov.br/noticias/detalhe/65298

[7] See Lima, Ortellado and Souza, ‘O que são as políticas culturais?’, 6, Santos, Tradições populares e resistências culturais and Miranda, A trajetória das políticas públicas de cultura no Brasil.

[8] About UNESCO's definition of cultural policy see UNESCO, “About 1970 Convention”, United Nations Educational, Scientific and Cultural Organization, April 24, 2024, accessed 10 July, 2024, https://www.unesco.org/en/fight-illicit-trafficking/about#:~:text=The%201970%20Convention%20on%20the,illicit%20trafficking%20of%20cultural%20property.

[9] See Lima, Ortellado and Souza, ‘O que são as políticas culturais?’, 2.

[10] See Lopes, ‘Da democratização da Cultura a um conceito e prática alternativos de Democracia Cultural’, Lacerda, ‘Democratização da Cultura X Democracia Cultural’ and de Souza Marques, Críticas ao modelo hierarquizado de cultura’.

[11] See PJMC, “Quem somos”, *Programa Jovem Monitor/a Cultural*, acessed June 29, 2024, https://jovemmonitorcultural.prefeitura.sp.gov.br/quem-somos/

[12]See AEMC, “Projetos Culturais”, *Associação Educativa Maria do Carmo,* acessed July 12, 2024 https://aemc.org.br/projetos/projetos-culturais/

[13] See PJMC, “Espaços culturais”, *Programa Jovem Monitor/a Cultural*, acessed June 29, 2024, https://jovemmonitorcultural.prefeitura.sp.gov.br/quem-somos/espacos/

[14] See PJMC, “Encontros Estratégicos com Gestores Orientadores”, *Programa Jovem Monitor/a Cultural*, acessed June 29, 2024, https://jovemmonitorcultural.prefeitura.sp.gov.br/2024/06/28/encontros-estrategicos-com-gestores-orientadores/

[15] See PJMC, “Confira as fotos do primeiro Encontro Geral de 2024 no Centro Cultural da Juventude”, *Programa Jovem Monitor/a Cultural*, acessed June 29, 2024, https://jovemmonitorcultural.prefeitura.sp.gov.br/2024/01/30/confira-as-fotos-do-primeiro-encontro-geral-de-2024-no-centro-cultural-da-juventude/

[16] See EGC, “Apresentação”, *Escola Superior de Gestão e Contas Públicas do Tribunal de Contas do Município de São Paulo,* Acessed June 02, 2024, https://escoladecontas.tcm.sp.gov.br/apresentacao

[17]See EGC, “Programa Jovem Monitor Cultural retoma atividades de 2024 na EGC”, *Escola Superior de Gestão e Contas Públicas do Tribunal de Contas do Município de São Paulo,* January 22, 2024, acessed July 15, 2024 https://escoladecontas.tcm.sp.gov.br/noticias/detalhe/64942

[18] See EGC, “Relatório Anual 2023”, *Escola Superior de Gestão e Contas Públicas do Tribunal de Contas do Município de São Paulo*, acessed June 30, 2024
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THE SLEEP OF REASON: OR SURFIN' THE TSUNAMI

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LA MANIERA

In an attempt to rescue sixteenth-century art from the ill repute that much of it enjoyed in the nineteenth century, it has been endowed with virtues peculiar to our time – especially the virtues of aggression, anxiety and instability.

– John Shearman, *Mannerism: Style and Civilization*[1]

The history of art and architecture reflects cultural phenomena, not just as representation but also in reaction to the economic and political exigencies that influence every facet of societal life and urbanism. To this end a vein can be traced in architecture and civic design and more generally in the visual arts, a moment of extraordinary innovation that corresponds, not to moments of socio/political health but to episodes of collapse and discontent, such as the post-Renaissance in Italy, Spain under the Hapsburgs and Bourbons producing Velázquez and Goya, the turmoil that followed the many revolutions and retrenchments that shook France for a century after 1789, the brilliant explosions of creativity that accompanied the crumbling *fin de siècle* in Austria or the agitated theoretical flux during the recessions of the Reagan/Bush era in the US. The most pertinent case is the catastrophic economic collapse that began in 2007, caused by unfettered neoliberal greed but that devastated Spain where architects today, often denied the possibility of form making, or at least of building, raised content to an absolute.

Spanish architecture and urbanism, inextricably linked, are forced to survive in the weak afterglow of the democratic resurgence that followed the end of fascism accompanied by cultural explosions, like La Movida Madrileña, while facing hard times. Political and erudite, these diciplines aggressively assault convention. Barcelona's exceptional urban development that continued with more coherence after the 18th century with the Barceloneta, Cerda's vast interventions and the projects that the '92 Olympics underwrote provoke the question: can the sort of discontent in which art and architecture can often thrive conceptually likewise inform the development of urbanism in Catalonia and more generally in the nation, Europe and beyond?

…it is an unbalanced, discordant art – now emotional to distortion…Self-consciousness to this extent was a new experience to the West…confidence had now gone.

– Nikolaus Pevsner, "Renaissance and Mannerism"[2]

In a lecture at Princeton four decades ago the historian David Coffin referred to the peculiar episode in discordant style called Mannerism that coincided with a period of upheaval in 16th-century Italy that was characterized by religious conflict, plague, and the devastating agendas of tyrants and foreign forces. These produced what he called an "*architecture of the troubled conscience*." The myriad catastrophes of the era, the Sack of Rome by the Hapsburgs in 1527; the collapse of Renaissance

ideals provoked by the overthrow of the Florentine Republic in 1533 by the Medici who were great patrons but not great republicans; the Council of Trent and subsequent brutal response to Protestantism; the Rome of the Borgias among others; Popes more corrupt and at least as hypocritical as ours; economic uncertainty; an appreciable ennui generated by the impossibility of improving High Renaissance "perfection" – all these contributed to a highly sophisticated, deliciously perverse reaction in all the arts. As historian John Shearman points out,[3] of all the contingent 'styles', of the pre-Enlightenment, Mannerism was the only one to end in *ism*: bracketed by assured Renaissance and bombastic Baroque, the Gothic and Rococo. Mannerism's perversity was suspect, like some esoteric post-Enlightenment passion (Romanticism, Impressionism) or modern manifesto-driven art cadre (Cubism, Constructivism, et al.). Was it the discontent it embodied that encouraged history to overlook it, to ignore its discordant dynamism?

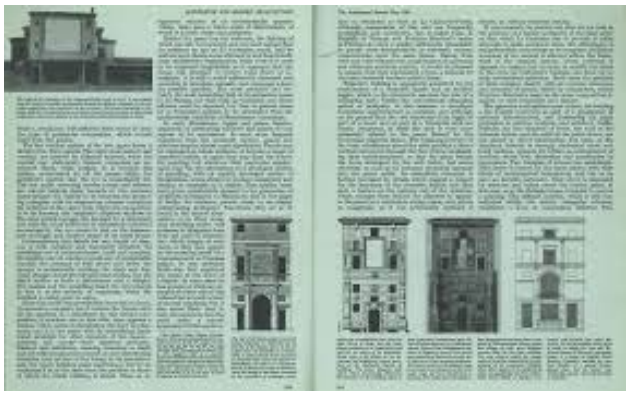

Figure 1. Mannerism and Modern Architecture

Mannerism appears to consist in the deliberate inversion of the classical High Renaissance norm as established by Bramante, to include the very human desire to impair perfection when once it has been achieved; and to represent, too, a collapse of confidence in the theoretical programmes of the earlier Renaissance, which it is able neither to abandon nor to affirm.
– Colin Rowe, "Mannerism and Modern Architecture"[4]

Colin Rowe sidesteps the economic and political events that shaped both post-Renaissance and the Modernism he compares Mannerism employing Wölfflinian procedures that emphasize form, inculcated by his teacher Rudolf Wittkower and augmented by aesthetic theory and the rise of literary 'formalism'. His intuition is to dismantle the Modernist canon using the ahistorical tools of the pundits who established it, among them Siegfried Giedion. Given this analytic axis, Rowe largely relies on comparative form, as would Robert Venturi in his affection for *La Maniera* 16 years later.[5]

In any case, I do not view Mannerist art primarily as a style. My point is more quotidian than Rowe's. It focuses on the political and economic atmosphere in which architecture and urbanism always find themselves embedded. This is not to say that theory should not place these disciplines within a complex matrix of twice-rationalized discursive[6] mysteries. It should. This is our job, to try to tie the not-so-simple machinations of culture into even more complex and enlightening knots so as to finally clarify – to call culture's bluff. But in so doing, theory can also suppress the simple and hard facts of contemporary social forces that the sheer weight of political/economic hegemony can bring to bear.

Figure 2. Ólafur Elíasson

Even when espoused by a scholar as clever as Rowe was in 1950,[7] the end game of formal inquiry can imply that art is primarily effect, visual or diagrammatic, regardless of ideas, cultural conditions or attitude that might inform such a complex process. The work of the artist Ólafur Elíasson is a fine example. If there is a critical element to his fantastic installations it is profoundly obscure or exhausted. The same could also be said of James Turrell. Sensation seems to rule in a hollow spectacle, emphasizing the visual root of that noun. On the other hand, it might be said that mimesis, the basis of pre-Modernist and much of Modernist art, could likewise be seen as effect, technique, or composition. Nevertheless the experience of mimetic viewing essentially divides and accommodates narrative and form, given that mimesis' innate realism demands form and signification. One of the roles of abstraction was that of stripping away the inevitable traditional calcification that narrative invites only to invite new textuality.

My emphasis here on political economy does not imply that form is not central to the ensuing discussion. Form is the bottom line, the bone beneath the meat! The inextricable cannot be extracted. To denigrate formalism, setting form against meaning or political sympathy, is clearly an absurd reduction. Extraordinary semantic slippage, seemingly engineered in its volatility, dislodges all certainties, except, perhaps, that of gravity, and renders clear polarities uncertain by default! This permeability is the essence of the metamorphoses and occasional moments of pure invention that ratify the arts.

For the sake of argument, let us say that this lack of commitment lies squarely at the doorstop of such an empty formalism, one that internally determines how its products are to be read and interpreted.
– Peter Eisenman, "[Bracket]ing History"[8]

With some notable exceptions, sought-after architects tend to market safe sensation like Elíasson. Certainly the heroic post-Franco period of Spanish work, the work of Viaplana y Tuñón that spawned Miralles y Pinós for example, could be said to have done so but these magnificent designers always accompanied form with the unusually astute conceptualization that characterizes art education in Iberia. While most designers will insist that an idea or even a critical position is embedded in their work, their success within the current neoliberal context that abhors the critical is redolent of the 'empty formalism' Eisenman decries. His comment implies that empty form must be opposed by its other, fullness. This syllogism immediately conjures up the specter of *autonomy* in its many manifestations, ranging from those addressing form (full or empty) to the overtly political, challenging capitalism's cruelest solipsisms.

[The aesthetic:] In contemporary experience, the aesthetic has, above all, the value of a paradigm. It is precisely through the aesthetic that we recognize the model of our richest, most vivid, most 'authentic' experiences in relation to a reality whose outlines are vague and blurred...The most 'full', the most 'alive', that which is felt as being experience itself, that in which the perceiving subject and perceived reality are powerfully fused, is the work of art...In the contemporary world, aesthetic

experiences...continue to occupy a peripheral position; but this peripheral position possesses not a marginal but a paradigmatic value. Aesthetic experiences constitute, in some sense, the most solid, the strongest model of a weak construction of the true or the real...
– Ignasi de Solà-Morales, "Weak Architecture"[9]
This essay is predicated on the notion that sociopolitical hegemony will always encourage mute form unless it is favorably propagandistic. Easily marketable and without the uncomfortable semantic baggage that must accompany the figural, form only has to present the one aspect that will always be present in any architectural project. Form may be the bottom line, but it is also easily assimilated by wealth and power, while other narratives that may block easy assimilation do not enter the equation. These narratives seem to be the most dynamic element in depression-ravaged Spain, where architecture can no longer remain mute, where the heroic language of the pre-crisis now need a more complex and covalent syntax, semantics, even a plot.

"THE LOWER STORY OF EXCHANGE"

(John Kenneth Galbraith) calculates that today roughly half of Western economy has been taken over by capitalist hierarchies. The other half comprises the low-profit regions, which these hierarchies willingly abandon to the market... (Braudel) adds that, indeed, capitalism was carried upward and onward on the shoulders of small shops and 'the enormous creative powers of the market, of the lower story of exchange...[This] lowest level, not being paralyzed by the size of its plant or organization, is the one readiest to adapt; it is the seedbed of inspiration, improvisation and even innovation, although its most brilliant discoveries sooner or later fall into the hands of the holders of capital.'
– Manual De Landa, *A Thousand Years of Nonlinear History,* citing Fernand Braudel, *The Perspective of the World* [10]
Extraordinary things can and do happen when Rome gets sacked or booms bust. Architecture and urbanism are forced below the radar, into Braudel's proletarian dynamic 'lowest level'. Passages are found other than those provided by a dominant political economy that, as in the case of hard-hit Spain, is beyond redemption. This is indeed very difficult for a discipline that is so central in the gaze of power and money in periods of ascendancy. But maximum evolution seems to occur at those catastrophic moments when architecture detaches from power, not when it serves. During the recessions of 1973–75, the double recessions under Ronald Reagan in the early '80s and again under George H.W. Bush in the early '90s, the concomitant absence of commissions empowered both discourse and formal experimentation in the US.
Spanish architects and urbanists today, often denied the possibility of form, or at least built form, are raising content to an absolute. Political and erudite, they aggressively assault convention. The discontented vapors that now rise and the contortions and colors they generate during the ongoing decade of economic crisis are forging a new mannerism. Many of the conditions that Italy endured in the 16th century are again at work in Spain - political turmoil, financial insecurity (brought on in part by architecture itself in collaboration with business interests), disillusionment, emigration, governmental corruption and violence and the ebbing of a euphoria that had greeted the death of Franco and the extraordinary emancipations that followed.
After 2008 Spain was a physical landscape of economic inequality and its discontents, with 35% unemployment among the young and 17.2% overall, compared to 4% in Germany, the UK and in the US where it all started in 2007. The facts are there, actual, physical, standing mute, and accusatory, poised at the brink of a widening and catastrophic social crevice. Following the 'sack' of an entire nation by politicians and real-estate interests, titanic and vacant commercial and residential projects, developer ghost towns, exhibitionless art centers and phantom airports[11] dotted the landscape, massive white elephants ridden by enriched plutocrats. Attacks on banks and demonstrations against the seats

of power have become usual in Spain, for obvious reasons. In early 2014 working people in Gamonal/Burgos rose up against yet another real-estate gambit by the notorious contractor Antonio Miguel Méndez Pozo who predictably owned the local newspaper as well. When residents were attacked by the police while protesting gentrification they rioted for four days sparking violent protests in support that emulating the occupy movement that started in Madrid. Architecture and its patrons were again on the front lines facing an angry and beleaguered society.

Despite a tendency to want impressive form to be accompanied by good intentions, nevertheless vagaries, contradictions and perversities can abound when those intentions are urban or architectural. Troubles will not necessarily reflect in cultural deficit. Historically, benevolence is not an overwhelming factor regarding quality. Patronage, often cruel and occasionally benevolent, whether from the top or middle stories, public or private, civic or familiar, becomes central to architectural discourse in a society where the old power relations are simply not working if they ever did save for a privileged few.

Don't be so gloomy…Like the fella says, in Italy for 30 years under the Borgias they had warfare, terror, murder, and bloodshed, but they produced Michelangelo, Leonardo da Vinci, and the Renaissance. In Switzerland they had brotherly love - they had 500 years of democracy and peace, and what did that produce? The cuckoo clock.

– Harry Lime (Orson Welles), *The Third Man*[12]

NOTES

[1] John K. G. Shearman, *Mannerism: Style and Civilization*, (London: Penguin, 1967), 15
[2] Nikolaus Pevsner, "Renaissance and Mannerism, c. 1420 - to c. 1600", in *An Outline of European Architecture*, (Baltimore: Pelican Books, 1943), 208 & 209
[3] Nikolaus Pevsner, "Renaissance and Mannerism, c. 1420 - to c. 1600", in *An Outline of European Architecture*, (Baltimore: Pelican Books, 1943), 208 & 209
[4] Nikolaus Pevsner, "Renaissance and Mannerism, c. 1420 - to c. 1600", in *An Outline of European Architecture*, (Baltimore: Pelican Books, 1943), 208 & 209
[5]Robert Venturi, *Complexity and Contradiction in Architecture*, (New York: Museum of Modern Art, 1966
[6] Here I use *discursive* intentionally, with its actual and often misused definition "*Discursive*, Adjective = a: Running hither and thither. b: Passing rapidly or irregularly from subject to subject: rambling, digressive; ranging over many subjects. - from Latin *discursus*, past participle of *discurrere* to run about.". However indicative of contemporary dialogue, the term is often substituted for a more accurate "*Discoursive*, Adjective = 1. Of the nature of or characterized by discourse or dialogue; conversational; (sometimes) specifically characterized by frequent or excessive digression; digressive, rambling. In later use also: of or relating to discourse. 2. Disposed or ready to discourse or converse; talkative; communicative; (sometimes also) verbose, prolix. Both from *The Shorter Oxford English Dictionary*, William Little, ed. (Oxford: Clarendon Press, 1944) p. 523
[7]Rowe's work moved from vivid and seminal toward the sophistic as the decades passed. A clear example is the much lauded but muddled "Transparency: Literal and Phenomenal" of 1963 [Colin Rowe and Robert Slutzky, in *Perspecta*, Vol. 8., pp. 45-54.]. If we disregard a spectacularly clever analysis of the Villa Stein's implied layering, he otherwise forces a formal comparison by means of historical distortions to identify irrefutably a new order of representation that certainly did exist but was given agency by other and more complex social/aesthetic means.
[8] Peter Eisenman, "Foreword: [Bracket]ing History," in Anthony Vidler, *Histories of the Immediate Present* (Cambridge, MA: MIT, 2008) p. vii
[9] Ignasi de Solà-Morales Rubió, "Weak Architecture", trans. G. Tompson. In S. Whiting, ed., *Differences: Topographies of Contemporary Architecture* (pp. 57-72). (Cambridge: MIT Press, 1996)
[10] Manuel De Landa, *A Thousand Years of Nonlinear History*, (New York: Swerve, 1997) p. 46; quoting Fernand Braudel, *The Perspective of the World*, (New York: Harper and Rowe, 1986) p. 631.
[11] Castellón-Costa Azahar, Huesca-Pirineos, Corvera and Ciudad Real, among other underutilized or vacant airports.
[12] Carol Reed, dir., *The Third Man*, author Graham Greene, 1949

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WHOLESALE BUILDING MOVING IN NORTHERN SWEDEN: HERE, NOW AND THEN

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INTRODUCTION

This study is part of continuing collaborative research into the phenomena of the wholesale moving buildings in northern Sweden. It raises questions about sustainability, through consideration of re-use in a moment of the further extensive implementation of neo-liberal ideas in economic practice and reasoning.[1] In northern Sweden it seems evident that the growth of financial investments through further extraction of minerals, timber and land-space for built development for housing and industry leads to further harms to the environment overall, in the pursuit of 'growth' and of 'progress' leads to further harms to the environment overall. In the context of northern Sweden, this has contributed to the general changes in climate and global warming, and crucially the change and destruction in places, habitats and the associated rights of indigenous peoples and their thousands of years of stewardship of this region.[2] The images are film stills taken from a film presentation made to accompany the paper and are now illustrative. Originally the film was intended to float across the presentation without stable link between image and text.

Structural moving can be understood as being central to the notion of circularity of architectural production and also specifically directed towards the agenda of de-growth. It follows ideas of the French Architectural practice Lacaton and Vassal of working with what is already there and no demolition.[3]

This paper attempts to unravel why, as a cultural, spatial, economic practice it is considered peripheral and to a great extent insignificant to either the architecture of the region, or to architectural production and theory more broadly, especially when the histories of formation of the cities and settlements of the North retain significant evidence of wholesale structural moving. It also situates the practice as a way of measuring and analyzing the spatial shifts of the region.

Questions of sustainability could be framed by practices of de-growth and need to be understood through the function of neoliberal economic models. Here, in this research it raises several important questions about places, the city and its hinterlands, this current and preceding economic moments and questions about development. These questions are to be viewed here through the lens of image making and representation in multiple configurations of the structural move of buildings (Figure 1.).

Figure 1. Drone footage of the site after a building has moved. Robertsfors, Sweden by Sven-Erik Hilberer, 2023

THE CITY CONSUMING ITSELF

There is a difference in both the methods of structural moving and the economic, cultural, social rationale between the moved city of Kiruna and small scale individual moves. The first is a massive, sate funded LKAB (Luossavaara-Kiirunavaara Aktiebolag) mine company project of moving most of the whole city buildings of Kiruna in the North of Sweden where The city is arguably being swallowed up and moved along by LKAB as the largest iron ore producer in Europe.[4] The second, where this research focuses, is upon the mass of small scale moves undertaken across Northern Sweden over the past 40 years, some of which will be part of the intensification of neoliberal forms of settlement in the region.

Looking at the specific history of one of the last sole structural movers[5] in Northern Sweden can provide data for mapping this activity. It offers a specific understanding of a cultural past in the formation of the expanding cities and territories of the north.

Its significance is partly understood to be of only regional or peripheral interest, in that it is seen as something 'other' as a practice of reconfiguring cities. The practice is synonymous with the North and Arctic terrain and is also therefore seen as not being applicable or of value to consideration of other European contexts. This research contests this and suggests there are questions to be considered in relation to spaces of understanding for older historic European urban and rural contexts.

This work is not concerned with the insertion of the architectural profession and the practice and production of buildings. It is not about demountable systems and historic timber frame buildings and their potential for reconfiguration,[6] neither is it about the potential to move disused/empty housing[7] from so called 'de-populated' hinterlands[8] to expanding urban contexts. The research has a central concern: In considering the practice we might also consider that everything is unsettled, nothing is fixed down, everything is potentially on the move at the point of the surface of the earth, above and below and, in order to determine urban futures, material flux and flows are fundamental.

Figure 2. Timber house built in 1914. Moved 10 Kilometers out from the city of Umeå by Robin Serjeant, 2021

This research has documented parts of the process of wholesale structural house and single building moving, through for example a move from inside the city boundaries of the Northern Swedish city of Umeå to a rural hinterland. The research started with documenting the move of a particular house, (Figure 2.) built in 1914, which was taken from what was at the time of its' building, was a landscape of farmsteads on the outside of the city[9] and which has since become a prime site for redevelopment for multi story housing in the expanding University city of Umeå.[10] The economy of the move which was undertaken in 2021 was then based upon the increasing value of the land beneath the house, to the extent that it could effectively subsidize both the move to the more rural outskirts of the city and the refurbishment and preservation of the historic house itself, though in its' newly dis-placed context. This house is understood to be special, because it has specific, historic value as an exemplar of the architectural Romantic period of the time and region, but it is also ordinary and everyday, just another moved structure similar to masses that have occurred across the region. Part of this unsettling was a parallel perception of the area of systems utilizing enormous resources to establish and maintain settlement and its infrastructure, to counteract natural forces of erosion and disintegration against ideas of flux and unfixity. According to the house mover himself he has individually made over four hundred moves. It holds an idea and approach to context that is less familiar in more central and arguably more overdeveloped European spaces, where historic value is inextricably bound to context and urban landscape.

This paper argues that this moving process offers a set of practices that question material flows associated with potential sustainable futures. This particular practice is also close to ending as the structural mover is one of only two remaining practicing in the region. When he stops working, years of acquired knowledge, judgment and skills will end with him. The methods and process speak directly to tacit knowledges of craft practices.

It is important to note that this single house move is not representative of the other four hundred single building moves of the contractor, or even of the moved buildings in the region, because these constitute a range of contemporary buildings constructed more recently (such as in the past thirty years) and built of concrete, brick, stone and other heavyweight and non-flexible, non traditional Swedish construction.

Figure 3. The underside of the house in Umeå, lifted and ready to move, by Tonia Carless, 2021

An underlying principle of husflyttningar is the capacity for everything to shift (Figure 3.) It has its origins in this frontier territory has associations with the extreme climatic conditions near to the Arctic Circle.[11] It can also be considered in the context of geological uplift[12] occurring in the region, where the land is increasing and the sea receding and which in turn taps into an idea of structures and land elevating from the earth. The notion that architecture is mobile, and cannot be fixed down seems critical to the current projected climate crises, intensifying here in the northern periphery faster than anywhere else in Europe and perhaps across the globe. It conjures the scene from the *Wizard of Oz*[13] where Dorothy's house is ripped from the farmstead by the tornado and becomes a house in flight.

Figure 4. The house on its way out of the city past Ikea by Tonia Carless

An image of this is of the house mover and truck carrying the house past IKEA in Umeå. (Figure 4.) An advertising billboard text proclaims 'finally moving out' a text which denotes the low cost availability of furnishing a home interior for the newly settled or relocated. It might also denote the moving out of historic buildings from the expanding city (the city eating itself).
It could be argued that the city of Kiruna is the fastest yet crudest form of structural move, where the entire city is being re-located by the mining company LKAB to allow for the expanding mine work

(the mine eating the city). This mass relocation is upheld across the world as an urban sustainability success story,[14] despite some critical views and questions about its status in terms of spatial production, not least that 'Sustainability was used in the planning documents for the future city at a technical and practical level, rather than as a lens to analyze the transformation process.' (Tepecik Diş and Karimnia: 2021:19)[15]

There are questions about what this process represents in the Kiruna mass move context. There is a clear problematic in terms of the process and exploitation of the earth, animals and inhabitants, including reindeer grazing and Sami populations who inhabit the terrain. The underlying, gut wrenching, counterweight of the move and the gaping mine hole was well demonstrated by a Masters student of architecture from Kiruna, studying at Umeå, as she held a drawing that she had made of home and the city as a giant black abyss, as a scale plan held against and merging with her black clothing to form an image of a gouged hole in her physical being. The example points to the question concerning what this space represents, between the uprooted structures, city and the ground.

SPLITTING

The movement of the exemplar house in Umeå was an unsettling event, achieved through rupture and dislocation. It raised questions about a different model of change around settlement. This move was not so much framed by international capital flows and state policy attracting investments to a geographical point on the globe's surface, but one that focused upon the caretaking of a building through several generations of occupation.[16]

The research project does not analyse the use of resources to seek a better way of building. The approach has been to question the practice, to consider in detail the spatial construction complicit with the overarching and vindicating ethic of growth and, through Andre Gorz' analysis of the concept of de-growth, to 'reinvent the future through the liberating discovery [encouraged by the crises and dilemmas of the industrialized world] that it is possible to make more with less'[17]

The focus of the research on the point of splitting the buildings from their foundation and the current location has aspects of Gordon Matta-Clark's Anarchitecture as 'a kind of dispersal'[18] He undertook a project called *Splitting*[19]where he cut through a house to reveal its interior and the gap between the materials. His work was a set of enquiries into what is difficult to speak about in the production of buildings and making cities. He looked at what lies beneath operations on the surface, both real and representational, to uncover something already present but not acknowledged. He had an interest in making visible lost space, and the consequential loss of social and cultural spaces through the processes of economic development. His work took a position on alternative and resistant lines of change, but developed often through a sense of performative play alongside a focus upon the major and micro transformations of things. Similarly this work has the potential to consider ideas of repositioning lived experience at multiple and functional moments of time in this example of a ten Kilometer move of one house out of the city. The Matta-Clark projects underscore the unacknowledged and the unseen and this agenda is also taken up observing and recording the strangeness of moving buildings in the North of Sweden where it is normalized as an accepted part of regional and national spatial reconfiguration. As a possible demonstration of what the move represents more than capital economy this is a form of 'Splitting' but as a series of splits that 'open up' the house and its move conceptually, as the house on the lorry trundles across terrains both physical geographic and social and political (Figure 5).

Figure 5. Building on the move at Robertsfors 2023 by Tonia Carless

This individual structural moving process is undertaken through careful measuring. The process considers the weight of the building and its' partial excavation, lifting, detaching, prop positioning, sliding, travelling (including permits and specific widths and loads over bridges. It requires extending steels through welding and cutting, timber crib stacking, and a complete set of hand made, structural moving tools and devices for fine tuned shifting of structures between spaces (Figure 6.).

Figure 6. Steel flanges with soap for sliding by Tonia Carless and Robin Serjeant 2023

The moving process includes the cutting free of buildings rooted into the ground by basement constructions. The structural mover either takes the whole building onto the truck with its ground slab, or cuts it free from its basement at ground level and leaves the basement behind, or uses a combination of these methods in addition to cutting the building in half or other section in order to accommodate its width on the truck.

This knowledge may be lost as the practice of sole moving diminishes. It is a process that resonates with the notion of Buckminster Fuller 'ask not how much your building costs but how much it weighs'.[20]

HERE, NOW AND THEN

The focus on house moving is not a practical and technical solution, with an idea of mobilizing empty buildings across the terrain of northern Sweden. This project is not focused on a calculus of sustainability through the practice of moving buildings, and their refurbishment in a different location. Nor is it to propose an environmental benefit calculated by way of costs, reuse of building material and built artifacts, reuse of space, settlement costs, or refurbishment costs.[21] This project is not a proposal for making use of redundant buildings in a hinterland, (a hypothetical 'surplus housing stock') and having them brought to urban areas, or peri-urban areas. Such factors are important but the focus of the research is about the phenomena of moving buildings

There is too much left unconsidered in such simplistic proposal focusing on costs and quantities. The work of Eyal and Ines Weizman,[22] as part of the practices of the Forensic Architecture group, raises important questions as to the consequences of human agency, modes and content of representation around events. This research proposes that there is enquiry into the control of the appearance of things by economic and political interests in particular places and with particular events. Such an analytic framework certainly can be used here to examine architectural representations, at any scale of drawing or image making. It can extend to policy documents of land use, as well as legislative framing directed at development and growth.

Figure 7. The Expanding city moving towards the lakeside cabins of Nydala, 2021 by Robin Serjeant

The work asks: What is there before, what is proposed or has occurred in the after state, what is left behind? In what or whose interests are these changes being made, and what are some of the consequences. (Figure7.) It also contains (especially through housing provision) considerations of the causes of rural de-population and over or expanding population of the northern cities of the region.

For the purposes of this paper and considerations of cultural histories and craft, the house move is a sustainable practice of land and material use and exposes the fluidity of things in this region. It could be argued that the example of the form of moving effected in Kiruna is the antithesis to this because it is organized solely through economic determinants. If the mine is to expand, the city has to move. The city and occupants are displaced and neither sustained or regarded as actors in their own right.

As a practice the wholesale moving of buildings does prioritize an alternative solution to planned demolition and optimizes an economy of systems of re-construction, but this is not the key aspect of the research. The forms of this moving, as a horizontal dynamic architecture, are multiple and diverse (scales, distance and terrain of moves as well as types of construction and materials) but using the

same set of self-made tools and materials. These moves and processes are visible along the surfaces of the steels. They show loads and weights of structures and size and scale of the under space which can also be seen in the welded extensions and flanges of the steels. 40 years of moves by one house mover is a multiple trace and a ghost flux floating across terrain with some remaining basements, to new settlements and leaving lost neighbours.

CONCLUSION

Frederic Jameson said that 'it is easier for us today to imagine the thorough going deterioration of earth and nature rather than the breakdown of late capitalism; perhaps that is due to some weakness in our imaginations'[23] The potential for de-growth implicit in structural moving and the conception of the space between land and the building aims at such an imagining.

The study of the four hundred moves of an individual house mover in the region raises a detailed consideration of the growth of urban settlements and the specific gentrification effected in the region. It considers rural depopulation, reuse of buildings, and local and small scale operations with the framework of instability and the unsettling of place and territory. It provides counter-narratives to settling myths, including Swedish sate constructs of the north,[24] the space of development and the continuing exploitation of resources, timber, minerals, energy and more.

Settlement would seem to be a motivating myth for this part of Sweden, from the viewpoint of Stockholm, as well as being promoted by keen entrepreneurs in the north. It is clear that particular forms of settlement are deemed a requirement alongside the industries of extraction and as a side effect of the Eurocentric view of cultures, and the displacement of indigenous societies. In this moment where the current model of neoliberal economics is set to rupture a previous social welfare society, moving buildings should be a context for further discussions on 'the vision, contours and central policies of a de-growth society'[25] as well as a possible route towards transformation and sustainability.

NOTES

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INTANGIBLE CULTURAL HERITAGE AS A RESISTANCE FOR SOCIAL CHANGE IN WOMAN, LIFE, FREEDOM

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INTRODUCTION

This paper examines how Intangible Cultural Heritage (ICH) serves as a tool of resistance among marginalized communities during the 2022 Woman, Life, Freedom Uprising in Iran. It specifically investigates the role of performing arts, particularly music, and women's social practices and rituals in catalyzing social change in Iranian cities. After establishment of Islamic regime in 1979, the gender dynamic within ICH often empowers male-dominated elements while neglecting and even causing the loss of female-dominated ones.

The tragic death of Mahsa Amini, a 22-year-old Kurdish girl in the in the September 16th 2022, triggered the uprising, showcasing the resilience and transformative potential of cultural expressions in challenging oppressive norms, especially those related to the mandatory hijab and the ban on women singing following the revolution and overthrown of Pahlavi monarchy. Despite authoritarian efforts to suppress these expressions, music and women-centric rituals have become potent forms of dissent, critiquing the outdated and repressive beliefs of the Islamic regime. This mobilization through cultural forms has fostered unity among people of different ages and genders and attracted global attention through social media, enhancing international awareness and support from other nationalities and Iranian immigrants in the diaspora. Drawing on Durkheim's theory of collective effervescence and ritual theory, the paper argues that these shared cultural experiences promote inclusivity and resilience, confronting established power dynamics and advancing social justice.

The analysis reveals that, in the face of totalitarian suppression, ICH persists as a symbol of empowerment, emphasizing the significant its role in inspiring and sustaining social change. This study contributes to understanding the intersection of ICH and political activism, highlighting the enduring impact of ICH on movements for societal transformation.

Convention of 2003 for the Safeguarding of Intangible Cultural Heritage

To begin, I will provide an overview of the objectives and definitions of ICH outlined in the UNESCO Convention of 2003 for the Safeguarding of ICH. Iran officially became a party to this convention in 2006, thereby legally obligating itself to fulfill the commitments outlined in the convention.

Purposes of the Convention

The purposes of this Convention are:

1. (a) to safeguard the intangible cultural heritage;
2. (b) to ensure respect for the intangible cultural heritage of the communities, groups and individuals concerned;
3. (c) to raise awareness at the local, national and international levels of the importance of the intangible cultural heritage, and of ensuring mutual appreciation thereof;
4. (d) to provide for international cooperation and assistance.[1]

Definitions

For the purposes of this Convention,

1. The 'Intangible Cultural Heritage' means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This ICH, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. For the purposes of this Convention, consideration will be given solely to such intangible cultural heritage as is compatible with existing international human rights instruments, as well as with the requirements of mutual respect among communities, groups and individuals, and of sustainable development.[2]
2. The 'Intangible Cultural Heritage', as defined in paragraph 1 above, is manifested inter alia in the following domains:

1. (a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;
2. (b) performing arts;
3. (c) social practices, rituals and festive events;
4. (d) knowledge and practices concerning nature and the universe;
5. (e) traditional craftsmanship.[3]

3. Safeguarding' means measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage.[4]

This type of heritage pertains to the intangible aspects of cultural heritage, meaning it is not physically tangible or visible. As Deborah Whiters wrote, this is heritage grounded in practices, representations, expressions, knowledge and skills, rather than exclusively in tangible, material objects or historic sites, such as a vinyl record or a well-known music venue.[5] In the realm of ICH, it is intrinsic to recognize that this cultural phenomenon originates from within society itself. Consequently, human individuals play pivotal roles as stewards and transmitters of this specific cultural heritage. Janet Blake, asserts that the implementation of the 2003 Convention inherently necessitates addressing the role of human beings as cultural actors. This is because it concerns a form of heritage that is alive and predominantly resides within human beings. Blake underscores the significance of the human context in which ICH is enacted, practiced, and transmitted. She argues that without this human context, the heritage loses its vitality and ceases to be considered 'living'.[6] The human context is influenced by a multitude of factors. In this paper, I aim to discuss the gender dynamic as a specific focal point relevant to my topic within this broader context.

Gender Dynamics

Within this discussion, I will explore the gender dynamics and their interplay with ICH. Based on what UNESCO said, all ICH expressions carry and transmit knowledge and norms related to the roles and relationships between and within gender groups in a given community.[7] Referring to a given community, each society is shaped by its social structure which embodies distinct norms and roles. Social practices, festive events and performing arts may serve as occasions for addressing community issues and biases which are against, including those surrounding gender roles, norms and inequalities.[8] It is undeniable that participation in particular forms of ICH is influenced by gender.[9] Given the heterogeneous nature of communities and groups, it's imperative to recognize the diverse actors and their roles concerning specific ICH, with a keen focus on gender considerations. Failure to do so may result in missed opportunities for effective safeguarding. Furthermore, the interaction between gender and ICH is intricate and, to some extent, reciprocal, expressed through enactment, practice, and transmission.[10]

Considering the connection between the safeguarding of ICH and the dynamics of gender approaches to safeguarding have the potential to influence gender dynamics, impacting the status and recognition of communities or sub-groups. As the Convention says, bias in gender-based identification of ICH poses the risk of overlooking the heritage associated with certain gender groups.[11] Trying to safeguard ICH has been ignored or neglected until now, due to the lack of consideration for gender dynamics in society, and is ultimately futile. The upside is that communities ‘negotiate’ their gender roles and norms over time, and many gender-specific traditions that were the exclusive domain of one gender group in the past have since been opened by the community to include other gender groups.[12] As communities' gender dynamics continue to evolve, they present opportunities to progress towards gender equality and combat gender-based discrimination by engaging with ICH practices.[13] As Convention 2003 says, understanding the relationship between gender and ICH is significant for effective safeguarding in two ways: it can open new avenues to safeguarding and can strengthen steps towards gender equality.[14] Gender norms play a role in shaping how ICH is passed down, and in turn, ICH influences gender norms. This establishes a mutual relationship between gender norms and ICH.[15] Policies regarding ICH are designed to leverage the mutual relationship between gender and ICH. Therefore, in policymaking for safeguarding, it is essential to ensure the active participation of a diverse range of voices, including all relevant gender groups.[16]

Overall, gender dynamics not only influence the expression and transmission of ICH but also play a role in its safeguarding. This issue is more pronounced in the global south than in the global north due to the prevalent discrimination against women that occurs daily. According to Blake, in many Middle Eastern societies, women often occupy limited roles in public life, and as a result, the areas where they are active and engaged, along with their cultural traditions, are often separated.[17] But it is indisputable that over time, roles that were once static and unchangeable are more likely to evolve, creating entirely different roles. Before exploring the analysis of music (classified in the domain of performing arts) and rituals (classified in the domain of social practice, rituals and festive events) connected to women in the context of Woman, Life, Freedom Uprising, it's crucial to start by elucidating the sociopolitical context underlying gender dynamics in Iran, focusing particularly on the role of women in the music. This is significant as the rituals that I aim to analyze are closely tied to women's vocal performance.

Sociopolitical Context in Iran Before and After the Islamic Revolution 1979

According to Nahid Siamdoust, music became one of the initial casualties in 1979. With the overthrow of the Shah's regime (Pahlavi dynasty) and the establishment of the Islamic Republic, the new regime was not inclined to permit music in their envisioned “pure” society. They believed that

music had played a role in the moral corruption of the youth.[18] So, in this new Islamic Republic, music was either ignored or completely banned. Many types of music were quickly forbidden on radio and TV, music schools shut down, and musicians, especially female singers, faced mistreatment.[19]
Considering Initially prohibiting all music after the 1979 revolution, the leaders of the Islamic Republic eventually acknowledged the necessity of permitting some musical expression.[20] From this point forward, music was anticipated to function as a mechanism for reinforcing the governing ideologies within society. However, the Islamic Republic has suppressed music that diverges from its political and ideological agenda, prohibited music deemed as challenging to those interests, and promoted a widely accepted yet superficial musical culture, while a vibrant but unofficial subculture flourishes primarily outside of official public domains.[21] An example is underground music which often becomes popular through social media but is not officially broadcasted on state media.
So certain types of music received approval for broadcast on the highly conservative state media. The state extensively utilized music for revolutionary propaganda and during the protracted Iran-Iraq war which erupted shortly after the revolution and endured from 1980 to 1988. However, it suppressed other genres of music, often punishing individuals involved in their creation, distribution, and consumption. Throughout these evolving circumstances, female musicians endured the greatest hardships. Women's voices were considered un-Islamic shortly after the revolution, resulting in the forced silence of some of Iran's most renowned musicians. This silence, marked by the near-total absence of female voices in post-revolutionary Iranian music production, is striking, particularly when contrasted with the soundscape of Pahlavi-era Iran.[22] For instance, during the Pahlavi era, Qamar-ol-Moluk Vaziri (1905-1959), whose name became legendary as one of the first woman musicians of Iran, was among the initial sounds recorded on the gramophone and broadcasted on the radio. There are others, such as Parisa, Rohangiz, Moluk Zarabi (Kashani), Giti Pashaei, Simin Ghanem, Delkash (Esmat Bagherpour Baboli), Googoosh (Faegheh Atashin), etc. Some of them after 1979 had to immigrate and live in exile, while others remained in Iran, deprived from singing, ultimately passing away without passing on their talent to the next generation through education.
Regrettably, the solo female voice remains officially banned to this day.[23] In the years following the overthrow of the Pahlavi monarchy in 1979, the younger generation of the revolution has grown up and voiced their criticisms of political and social circumstances through music on a broad scale. This continues a tradition that connects numerous generations of Iranians who have pursued political freedom for over a century.[24] As a result, Over the years, music has functioned as a significant alternative arena for political, social, and intellectual expression, and Iranians, both creators and consumers of music, have attributed immense importance to it.[25] In the social sphere specifically, music has played a significant role for at least as long, serving as a means to convey critiques and address taboo topics. This is often achieved through seemingly light-hearted folk songs that conceal their sharp criticism.[26] As evidenced in the Green Uprising of 2009, 2017-2018 Iranian protests, November 2019 protests etc., Iranian musicians critique political and social issues through their songs across various genres, including traditional, pop, rap, and others. But from my perspective, the pivotal moment for rituals, folk songs and music in general as a means of criticizing this regime occurred during the Woman, Life, Freedom Uprising of 2022. In later years, women are only permitted to sing in concerts where both the performers and audience consist entirely of women. Men and women singing together are allowed only if women's voices do not overshadow those of men, as in the case of background vocals. We have observed a dual behaviour from the government, one of the reasons is as follows: The state allocates significant human and financial resources to regulate any forms of joy and self-expression that occur outside its established power framework. While such expressions are permitted during official celebrations, such as the anniversary of the revolution, both musicians and concert attendees may face punishment if their expressions occur spontaneously or outside of

officially sanctioned contexts.[27] Now, I would like to discuss the context of ICH associated with women in Iran, considering my position. Again, it is worth noting that music and rituals are encompassed within ICHs.

Women in Intangible Cultural Heritage

First and foremost, it's crucial to recognize that Iran's cultural richness owes much to the multitude of ethnicities and races that have coexisted within its borders, including Kurds, Lurs, Baloch, Turkmens, Mazanderanis, Azerbaijanis, Gilaks, Laks, Arabs and others. However, since the establishment of the Islamic regime in 1979, these communities, ethnic groups and religious minorities have largely faced marginalization leading to exclusion from the political and social context of society. Moreover, within this patriarchal society, systemic discrimination against women persists across various contexts, permeating even the practice, transmission, and preservation of ICH. We are witnessing the intersection of gender, race, dominant narrative and power dynamics in this context and each of these factors influences the others in intricate ways.

This situation is exemplified within the realm of ICH by traditional folk music for women. In my perspective, the severity is heightened here because ICH is traditionally passed down verbally from generation to generation, heart to heart. Indeed, this form of transmission stands as one of the most effective approaches for preserving and safeguarding ICH. Therefore, if women are prohibited from singing and are unable to transmit these ICHs through education to the next generations, these invaluable cultural elements are at risk of extinction, forgetfulness, or even loss. For instance, Zobeydeh Asadzadeh, the last bearer of the ancient folk music associated with the “Zardeh Beh Dar” ritual, was unique in her time. This oral tradition, song and ritual are related to harvesting wheat and eliminating pests. Zobeydeh was the sole individual to have directly learned every folk song and tradition associated with this ritual from her predecessors in the Eastern part of Iran (South Khorasan Province) to perform them. Despite her exceptional talents, she remained obscure without proper education to the next generations.

According to Blake's statements, for countries still undecided about how ratifying the 2005 Convention on Diversity of Cultural Expressions, might affect their internal policy decisions, Article 1 is crucial. It reiterates the sovereign right of states to determine their own cultural policies, emphasizing the importance of maintaining the state's authority in this regard. This is especially significant for nations like Iran, where cultural policy-making is seen as a cornerstone of self-determination and plays a vital role in ensuring internal security.[28] It's evident, from my perspective, that Iran has a serious concern about the empowerment of these marginalized communities and ethnic groups. There is an issue that granting them space and acknowledgment after years of oppression might cause them to assert their independence, thereby posing a threat to the nation's territorial integrity. Simultaneously, the authorities explore different approaches to undermine the identity of the mentioned groups and prevent them from gaining power, even though the violence, if necessary, will be elaborated upon later.

So, what exactly is the Woman, Life, Freedom Uprising, and how do folk music and rituals serve as tools of resistance, contributing to uniting people from all walks of life, both in Iran and abroad?

Woman, Life, Freedom Uprising 2022

The onset of this Uprising was triggered by the tragic murder of Mahsa (Jîna) Amini on September 16th, 2022, in Tehran, a 22-year-old Kurdish gril. This event catalyzed global demonstrations against the authoritative governance of the Islamic regime in question. It is mandated for every girl once she reaches the age of 9 because this age is the beginning of womanhood and maturity for them according to Islam. This decree prompted women to protest against the serious restrictive regulations on March

8th, 1979, in International Woman's Day in Tehran. Despite their opposition, this law was implemented and remains obligatory until now.

Women's Ritual and Music as Tools of Resistance

It is worth considering that Woman, Life, Freedom was borrowed from Jin, Jiyan, Azadî, a Kurdish movement led by women in Turkish Kurdistan. As mentioned before, we witnessed the tragic death of an innocent Kurdish girl. During her funeral in her hometown Saqqez a city located in the Kurdistan Province of Iran, her family grieves for their young Kurdish girl, and in that moment, Kurdish mourning and lullabies, Kurdish anthems and songs and rituals have emerged as potent forms of resistance against this totalitarian regime as the primary culprit for her murder.

One of them was the epic Lur song, A century-old traditional folk song called "Dayeh Dayeh"[29] in Persian that means "Nanny Nanny or Mother Mother, it is time to war" in order to invite the others to resistance and bravery. This folk song was sung at the funeral and memorial for Nika Shahkarami, a 16-year-old Lur girl who was murdered in Tehran during nationwide protests Woman, Life, Freedom.

One ancient mourning ritual among Kurdish and Lur ethnic groups involved women cutting their hair as a symbol of grief for lost loved ones. This practice, known as Gisobaran in Persian, later evolved into a powerful symbol of solidarity during the *Woman, Life, Freedom* Uprising. Social media platforms like Instagram, WhatsApp, Telegram, Facebook, Twitter, and TikTok helped raise awareness about the compulsory hijab, reaching even those unfamiliar with the issue. It became a symbol of protest and women's resistance. The examples I mentioned are just a few of many of them. Indeed, it is evident that the concepts of folk, traditional songs, as well as rituals related to women, quickly transformed into powerful tools for unifying individuals and fueling resistance against oppression. This transformation drew upon the expertise of renowned musicians,[30] composers,[31] and singers[32] from both within and outside the country. However, the crucial question remains: why have these elements become a driving force in this Uprising?

This important question reminds me of Émile Durkheim, a French sociologist's theory on rituals. In his formulation, rituals serve to both convey and strengthen collective representations and feelings of solidarity.[33] Here in *Woman, Life, Freedom* Uprising, the rituals and music evoke emotions, and collective consciences leading to fostering a sense of unity, a phenomenon that was prominently observed during this Uprising. According to Robert N. Bellah, interaction rituals fundamentally require:

1. a gathering of at least two people in close proximity;
2. a shared focus on the same object or activity, with each participant conscious of the others' engagement;
3. a mutual experience of a specific mood or emotion.[34]

Here due to the interactive rituals embedded within this Uprising, we have seen gatherings of more than two individuals coming together. Their united aim is to strongly oppose systemic discrimination against women, a cause that has gained significant prominence after the Islamic revelation in 1979. This sentiment is not exclusive to men, who often take on leadership roles in every aspect of society, but is also passionately embraced by women, who actively participate and contribute with their strong determination and bravery. Here the identity that was suppressed and oppressed by this regime for years is now finding the chance to resurface through this form of heritage.

Besides, rituals and music possess the capacity to mobilize people for social change, even on a small scale. As Ron Eyerman and Andrew Jamison describe the phenomenon of the "mobilization of tradition" in social movements. They explain that even after the movements lose their political momentum, the music associated with them persists as a memory and has the potential to inspire new waves of mobilization.[35] In these timeless folk music and rituals, women take centre stage as the

primary voice, yet as previously noted, they were relegated to the background after the revolution. However, many women now reclaim these spaces, even singing old songs once sung by men, this time in their own voices. In these songs, every listener encountering this form of resistance on social media feels compelled to share it, thus manifesting opposition. As Bella says in this process of ritual interaction, group members, united by their shared experience, momentarily feel a sense of belonging, marked by a perceived boundary between those within and outside the shared experience. They also experience a moral force on one another, symbolized by the focal point of their interaction.[36]

This collective resistance, unleashed through traditional music and rituals, signifies a powerful force for change. Social change regarding the compulsory hijab is undeniable from my perspective. Just a few years ago, it was considered abnormal and even strange for women not to wear the hijab in public spaces. However, thanks to this societal shift, the situation has improved significantly. Nowadays, men even encourage women not to wear the hijab. Nonetheless, it's important to acknowledge that not all women or men share this perspective because they advocate the regime's viewpoints. But people have taken significant steps, offering hope for the future.

CONCLUSION

The Woman, Life, Freedom Uprising of 2022 in Iran, a response to the tragic death of Mahsa (Jina) Amini, symbolizes the resilience of cultural expressions as tools of resistance in Iran's socio-political landscape. This uprising exemplifies how folk music and rituals related to women serve as powerful means of challenging oppressive regimes. Through social media, these expressions of solidarity have garnered global attention, particularly in raising awareness about the compulsory hijab. Despite this totalitarian’s attempts to suppress diversity, these ICH persist as symbols of hope and resilience, confronting power dynamics and advocating for inclusivity. Drawing on Durkheim's theory, these collective experiences foster a sense of unity, driving social change and inspiring hope for the future, thus highlighting the transformative influence of culture in advancing justice and liberation.

NOTES

[1] UNESCO, *Convention for the Safeguarding of the Intangible Cultural Heritage* (Paris: UNESCO, 2020), 5.
[2] UNESCO, 5.
[3] UNESCO, 5.
[4] UNESCO, *Convention for the Safeguarding of the Intangible Cultural Heritage* (Paris: UNESCO, 2020), 6.
[5] Deborah M. Withers, "Intangible Cultural Heritage and the Women's Liberation Music Archive," in *Sites of Popular Music Heritage* (New York: Routledge, 2014), 126.
[6] Janet Blake, "Gender and Intangible Heritage," in *Gender and Heritage: Performance, Place and Politics* (New York: Routledge, 2018), 207.
[7] UNESCO, *Convention for the Safeguarding of the Intangible Cultural Heritage* (Paris: UNESCO, 2020), 3.
[8] UNESCO, 3.
[9] UNESCO, 4.
[10] UNESCO,10.
[11] UNESCO,10.
[12] UNESCO, 4.
[13] UNESCO, 8.
[14] UNESCO, 12.
[15] UNESCO, 3-4.
[16] UNESCO, 12.
[17] Janet Blake, "Human Rights Dimensions of Gender and Intangible Cultural Heritage," *Human Rights Defender* 24, no. 2 (2015): 6.
[18] Nahid Siamdoust, *Soundtrack of the Revolution: The Politics of Music in Iran* (Stanford: Stanford University Press, 2017), 3.
[19] Siamdoust, *Soundtrack of the Revolution,* 7.
[20] Siamdoust, *Soundtrack of the Revolution,* 2.
[21] Siamdoust, *Soundtrack of the Revolution,* 2.
[22] Siamdoust, *Soundtrack of the Revolution,* 3.
[23] Siamdoust, *Soundtrack of the Revolution,* 3.
[24] Siamdoust, *Soundtrack of the Revolution,* 3-4.
[25] Siamdoust, *Soundtrack of the Revolution,* 2.
[26] Siamdoust, *Soundtrack of the Revolution,* 3.
[27] Siamdoust, *Soundtrack of the Revolution,* 12.
[28] Janet Blake, "The Legal and Political Context of UNESCO's 2005 Convention on the Diversity of Cultural Expressions—Will it be Good for Iran?" *Iranian Review of Foreign Affairs* 1, no. 3 (2010): 71.
[29] https://youtu.be/vZmN2oYfmg0
[30] https://youtu.be/q6X0-mTuFqM?si=D_G5ig3DRGRE63Fa
[31] https://youtu.be/fYUNDTlim8I
[32] https://x.com/nahid8/status/1577031719244660737
[33] Jeffrey C. Alexander and Philip Smith, eds., *The Cambridge Companion to Durkheim* (Cambridge: Cambridge University Press, 2005), 16.
[34] Robert N. Bellah, "Durkheim and Ritual," in *The Cambridge Companion to Durkheim*, ed. Jeffrey C. Alexander and Philip Smith (Cambridge: Cambridge University Press, 2005), 185.
[35] Ron Eyerman and Andrew Jamison, *Music and Social Movements: Mobilizing Traditions in the Twentieth Century* (Cambridge: Cambridge University Press, 1998), 1–2.
[36] Eyerman and Jamison, *Music and Social Movements,* 185-186.

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DESIGNING FOR CHANGE; THE ROLES OF CITIES' URBAN LABS/STUDIOS

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INTRODUCTION

The idea of an urban design studio or urban lab has become a popular instrument for finding solutions to urban challenges faced by cities.[1] City managers became more aware of the emerging issues occurring at an unprecedented pace at the urban, technological, social, and economic levels. This continuous and rapid change necessitates unconventional solutions and unorthodox approaches.

Some argue that long-term traditional planning may not adequately address the pressing issues facing the city, leading to their escalation and eventual complexity.[2] Therefore, the need for different approaches arises and leads to new practices such as urban studios and urban labs, which open new horizons for urban governance where the municipalities and the public sector collaborate with the private and civic sectors[3] to shape the change in the city. Municipalities are key actors in this partnership and often lead the experimental actions in cities, as they have the multiple resources at their disposal as well as long standing experience and state-sponsored authority to govern urban development processes.[4]

There is no agreed-upon definition for "urban lab." It is an umbrella term that covers a variety of forms of organized experimental approaches in urban contexts. This study uses the term "urban lab" to refer to various practices, irrespective of their type or official name. Urban labs function at various levels, ranging from strategic labs that tackle city-wide issues to small-scale workshops that offer tools and knowledge for innovation and experimentation.[5]

The employment of urban labs is not limited to specific types of organizations; they can be launched by either the public or private sectors. This paper focuses on the role of urban labs within municipalities, specifically investigating their role in changing the city. Municipalities either initiate urban labs as specialized units, that is, geographically or institutionally bounded spaces, whether within or outside their premises, or use them as a tool and approach for intentional collaborative experimentation between the different actors from the public, private, civic sectors, and academia to create public value.[6]

This paper aims to study the different models of urban labs as instruments for change in municipalities, capturing the similarities in the characteristics and traits as well as the differences in the practices.

Ecosystems to co-create public value

Urban lab is a collaborative ecosystem that promotes open innovation.[7] It consists of a variety of stakeholders who actively contribute to the creation of public values. Local authorities play a key role in facilitating and encouraging coordination and collaboration among different actors. The private sector is involved in ideas development and prototypes execution, while citizens interact and provide feedback. Academics contribute their knowledge and expertise to the process. It necessitates the use of suitable methodologies and approaches, altering urban governance to facilitate the participation of diverse stakeholders, and educating and raising awareness about the dynamics and requirements of its processes. The governance model of urban labs is context-related; it is influenced by the political and socio-economic factors of each city, as well as the level of involvement aspired by the city's decision-makers and the lab owners.

Roles of Municipalities in Urban Labs

Municipalities can assume several roles in managing urban labs, such as launching, purposing, financing, organizing, allocating resources, and leading the lab,[8] depending on their level of engagement. Kronsell and Mukhtar-Landgren defined three primary functions of municipalities: promoter, enabler, and partner.[9] The promoter's role signifies that the municipality assumes a leadership position in the lab and utilizes its authority and capability to control the partnership, which may involve the participation of certain municipal leaders. An enabler's role is when the municipality creates favorable conditions or opportunities by enabling collaboration or providing support. The role of a partner, which is the most common role, is defined by shared leadership and equal participation, where each partner, including the municipality, has a clearly defined function.

RESEARCH METHODOLOGY

This study employs a qualitative research design, incorporating a literature review to investigate various types of urban labs. Additionally, it conducts a comparative multiple-case study analysis to examine how local governments and municipalities utilize urban labs to promote change in the city and tackle its growing challenges. The study illustrates the similarities in the characteristics of urban labs and the distinctiveness of their practices.

The process of selecting case studies begins with a web search using keywords like "urban lab," "city lab," "urban studio," "living lab," and "governmental innovation lab." The initial short list comprises 45 cases, which is further narrowed down to ten cases based on the following criteria: First, the municipality must have a primary role in overseeing the urban lab. Secondly, the case studies must exhibit diversity in terms of practices, orientation, and geographical location. Thirdly, the availability of the relevant documentation and information.

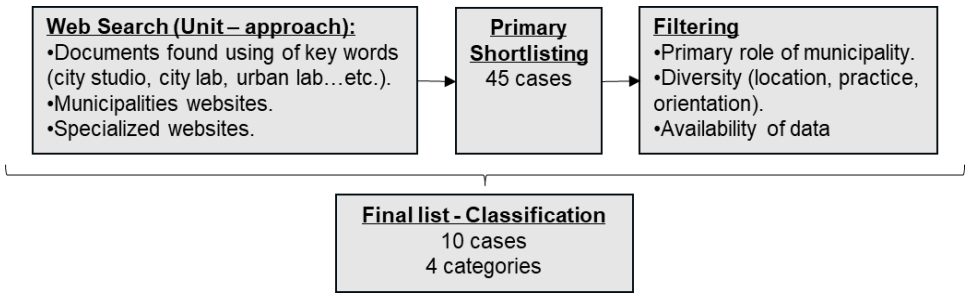

Figure 16. The process of case studies selection.

Data collection relies on the examination of published documents, such as research papers, reports and other publications issued by the urban labs, in addition to the correspondence and interviews with some managers and team members from selected urban labs.

TYPES OF URBAN LABS IN MUNICIPALITIES

The literature review reveals several forms of urban labs that exist under different names and classifications, whether they are specialized innovation units that are physically located within or outside the municipalities, or as tools used by cities' divisions and their collaborating entities. The study categorizes urban labs in municipalities under four categories (see Table 01): urban (design) studios, governmental innovation labs, city studios, and the city as a lab (living labs).

Urban (design) studios

An urban design studio is a model that focuses on the development of urban and built environments, mostly found in North America. It is generally located in the municipality; its main focus includes design review, developing design codes and regulations[10] and launching urban initiatives. [11]

Government innovation labs

A government innovation lab (GIL) is a specific type of public innovation place (PIP) which is a range of organizations with a direct connection to the public sector. Its creation aims to tackle complex public issues that traditional governmental structures struggle to resolve. In GILs, designers, public officials, and community members experiment with and propose innovative public services and policies while at the same time trying to reform and change the way government operates.[12]

City studios

City studio is a model in which the lab is co-chaired by both the municipality and the university; it aims to combine the academic knowledge and the free-thinking of university students with the professional experience of city officials.[13] City studios address specific subjects, to which they propose solutions within relatively a short period of time.

The city as a lab (living lab)

The city as a lab is a metaphor that indicates a practice where the city becomes an arena for innovation. Municipalities and other governmental agencies facilitate the implementation of new ideas in a real-life environment and under real-life conditions.[14] Urban labs serve as a tool for innovation, empowering the city to address specific issues by creating a framework that brings various stakeholders together. Municipalities and local governments also adopt this model to establish the city as a hub for business and innovation, enabling startups, developers, and tech companies to test their products under factual conditions.

	Case Study	City	Classification	Started	Ended	Owner	Municipality local gov. Role
1	Urban Design & Architectural Studio (UDAS)	West Hollywood – California – USA	Urban Design Studio	2019	On going	City manager's office	Promoter
2	Urban Design Studio (UDS)	Los Angeles – California – USA	Urban Design Studio	2006	On going	Planning department	Promotor
3	Mayor's Office New Urban Mechanics (MONUM)	Boston – Massachusetts – USA	Governmental Innovation Labs	2010	On going	Mayor's office	Promotor
4	Malmö's Innovation Arena	Malmö – Sweden	Governmental Innovation Labs	2013	2018	Environment department	Enabler
5	Maastricht (M-Lab)	Maastricht – Canada – USA	Governmental Innovation Labs	2012	2023*	Spatial planning department	Enabler
6	Citystudio – Montreal	Montreal – Canada	City Studio	2019	On going	Mayor's office & Concordia University	Enabler/Partner
7	London's Mayor Office's Urban Integration Lab	London – United Kingdom	City Studio	2019	2021	Mayor's office & London Metropolitan University	Enabler/Partner
8	Barcelona Urban Lab	Barcelona	The City as a Lab	2008	No info	Mayors' office (Barcelona@22)	Enabler/Partner
9	Singapore URA	Singapore	The City as a Lab	-	On going	Singapore Urban Redevelopment Authority	Enabler/Partner
10	Taipei Project Management Office (PMO)	Taipei – Taiwan	The City as a Lab	2014	On going	Department of Information Technology	Enabler/Partner

Table 1. Selected case studies – The authors.

THE THREE PILLARS OF URBAN LABS IN MUNICIPALITIES

The comparative analysis of case studies identified three pillars: methodologies, governance, and people, which are associated with processes that characterize urban labs in municipalities and form their ecosystems. Adopting methodologies that foster innovation and the development of new solutions, tested in a real-life environment, is necessary to address the rising city issues. Many stakeholders must be involved in innovation and experimentation processes; therefore, the municipality should adjust the governance of the urban lab to facilitate diverse participation and allow systematic, continuous development and adaptable changes that align with constantly changing conditions and needs. Ultimately, achieving change necessitates altering the performance and mindset of those contributing to the city's transformation.

Figure 17. The three pillars and their processes of municipal urban labs – The authors.

Methodologies

Municipalities, like other governmental institutions, tend to be conservative in their approaches, which are not suitable for addressing novel issues or urgent matters in modern cities, as they work carefully to minimize the risks and avoid making mistakes.[15]Therefore, the importance of urban labs emerges as a strategic tool that employs unconventional methodologies like innovation and experimentation, which are rarely adopted by municipalities, allowing them to develop and test new solutions.

Innovation

Innovation entails a journey of learning and discovery in which setbacks are frequently encountered, in which projects may cohere towards new ideas and partners, and the environment presents both constraints and opportunities. The Urban Labs approach to innovation is based on co-creation and co-development, in which city officials are actively involved in the design and implementation of city projects in a creative way rather than just in a procedural way.[16] Moreover, this approach is a process of enriching the organization's knowledge by emphasizing knowledge acquisition and dissemination. Urban labs' innovation is human-centric, aiming to enhance the quality of life of the city's residents with the collaboration of the different actors in the city. It can take several forms: (i) the development of a new item, such as a product, service, or value; (ii) the process of developing items; or (iii) the adoption of these items in a new context.[17] The study identified three different approaches that urban labs can adopt to drive change in the city: the first approach involves the lab directly tackling the design of ideas and solutions or providing services; the second approach involves the lab acting as a facilitator and coordinator for the innovation process, serving as a "front door" for the

experimentation in the city.[18] The third approach is when municipalities' divisions utilize the urban labs as innovative tools to tackle specific issues.

Experimentation

Experiments are special innovation projects whose goal is to learn something rather than achieve a predetermined outcome.[19] Urban labs have an explicit focus on the urban site, and in a broad sense, their purpose is to initiate activities that may become future initiatives to address city issues.[20] Experimentation aims to test the innovative products in real-life environments before applying them on a large scale. Despite the need and willingness to change, traditional municipal divisions are not generally safe places to try new ideas, therefore, urban labs offer a risk-resilient venture where there is always room to fail.

Sometimes urban labs, adopt a hybrid status[21] both physically and administratively; like in the case of m-lab, this position helps them to partially evade the established bureaucratic logic of the local administrative apparatus, which is necessary to gain space for experimentation with new approaches.[22] Urban labs, according to their model, can adopt various methods of experimentation: Urban labs and urban studios commonly employ design thinking, a method that depends on an iterative approach that challenges assumptions, redefines the issue, creates a model, and tests it. Collaborative experimentation is another model that emphasizes stakeholder co-creation and collaboration across all sectors. City studios employ experiential learning, which aims to combine academic knowledge and methodologies with professional experience to come up with innovative and creative solutions. When branding the city as a business and innovation hub, municipalities or governments use the proof-of-concept (POC) approach to collaborate and form partnerships with the private sector, either to provide a solution to current issues or to test new and innovative products for large-scale use and adopt them for city-wide policies.[23]

Governance

The complexity and diversity of city issues necessitate broad and almost unlimited collaboration and partnerships between the municipalities and the public and private sectors, in addition to academic institutions. On the one hand, municipalities play an important role in enabling urban labs to facilitate the needed collaborative experimentation in the city, as they have the power and legitimacy to foster and support change in the urban context. On the other hand, they encourage urban labs to continuously develop and review their methods to ensure better involvement of the different stakeholders and improved methods to tackle the city's challenges and issues.

Collaboration

Although municipalities usually collaborate and cooperate with many stakeholders in the city, urban labs' methodologies require a special form of collaboration where stakeholders, during the whole process, work together to co-create and develop ideas in an interactive way between knowledge recipients and knowledge sources, or between the users and the designers. According to Hossain et al.,[24] urban labs involve heterogeneous stakeholder groups such as academics, developers, industry representatives, citizens, and users, as well as various public and private organizations, and they comprise four key actors: *enabler, provider, user,* and *utilizer*. The experimental nature of urban labs requires employing a proper governance system that allows collaboration among the different stakeholder groups and structures user participation in a real-life setting by providing cohesion, offering support, developing competencies, and promoting participants.[25] Participatory governance is important because it leads to better and closer service to citizens' needs; strengthens the sense of trust

because it addresses disengagement from politics and democracy; increases intellectual capital and community cohesion; and strengthens individual relationships.[26]

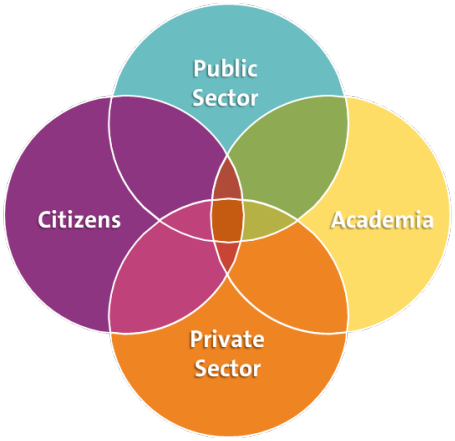

Figure 18. The collaborative sectors in urban governance – The authors.

Although urban labs collaborate with different sectors, the study captures a variety of multi-sectorial collaborations that focus on specific types of collaboration. The first type is interdepartmental collaboration, where the urban studio cooperates with the municipal divisions and departments to achieve the city manager's vision. The second type is collaboration with the private sector, where the urban lab facilitates the development of products needed by the city, helps promote the private sector's business, and focuses on the citizens' needs. The third type is collaboration with universities, in which city studios form a reciprocal partnership with the university to help the municipality profit from academic knowledge and help students and researchers learn from the city's officials' professional experience. Urban studios primarily adopt the fourth type, which emphasizes community participation, as a means of gaining valuable insights about city urban projects.

Adaptation and development

Urban labs employ an iterative approach and are involved in a wide variety of projects that require the utilization of different methods and approaches; therefore, it is essential for the urban labs team to be flexible and open to learning and adapting to new methods. The dynamic transformation of cities requires fluid units that can continually reassess and enhance their objectives, methods, approaches, and even ambitions within a relatively short period of time to best serve the city.

The study shows that typically urban labs (as a unit or as a tool) undergo significant change every two to three years, and this could affect their objectives, role played, and status, like in the cases of Malmo Innovation Arena[27] and Maastricht-Lab,[28] or their approach to innovation, like in the case of Taipei PMO.[29] In other cases, such as MONUM, where the study shows only two major changes within fourteen years,[30] the interview with its team reveals that they reassess and change their objectives and methods almost annually, despite not explicitly tracing this short-term re-adaptation.

People

Change and innovation in the city are integral components of a broader ecosystem that necessitates not only the adoption of new methods and governance models, but also the transformation of people's attitudes towards changes through education about the city's vision and objectives and involving them in the process.

Raising Awareness

Urban labs play a key role in raising awareness among current and future actors in the city, including the lab's team, about its issues and objectives, as well as how they can cooperate to achieve the desired transformations to improve people's quality of life. The study demonstrates a variety of practices at different levels. At the municipality level, the Urban lab's team functions as a satellite, orbiting its division to communicate the city manager's vision. It organizes seminars, conferences, workshops, and training programs to disseminate acquired knowledge and enhance the capacity of both its members and the municipality. In other instances, urban labs offer internship and fellowship programs, allowing participants to learn and share their knowledge. In city studios where the urban labs work with the universities, city officials, students, and university professors stated that working together changed their perceptions about the way transformation in the city should be tackled. Similarly, the co-creation process makes participants from the private sector more aware and sensitive about the importance of creating public value with every new product or service.

Networking

Urban labs are parts of a larger framework of experimental practices in local governance; they typically establish connections with each other to form specialized local or global networks,[31] or alternatively, they may operate under a single umbrella organization. Urban lab networks provide knowledge, experience, and lessons learned; they help connect the labs with experts in the fields of innovation; and in some cases, they provide finance and resources.[32]

Case Study	Methodology		Governance		People	
	Innovation	Experimentation	Collaboration	Adaptation	Raising Awareness	Networking
Urban Design & Architectural Studio (UDAS)	Leading the innovation process	Design Thinking	Inter-departmental / Universities	1 phase (yearly assessment)	Training and communication	-
Urban Design Studio (UDS)	Leading the innovation process	Design Thinking	Inter-departmental / Universities	2 main phases	Seminars, training, conferences, workshops, publications	-
Mayor's Office New Urban Mechanics (MONUM)	Leading innovation, Facilitation, Incubating UL	Design Thinking / Collaborative Experimentation	Inter-departmental / Universities / private sector / Community	2 phases (Continuous development)	Seminars, training, conferences, Publications, internship, fellowship	International (GIL)
Malmö's Innovation Arena	Facilitation & Coordination	Collaborative Experimentation	Inter-departmental / private sector / Community	3 phases	Workshops, training	National & International (Enoll)
Maastricht (M-Lab)	Facilitation & Coordination	Collaborative Experimentation	Inter-departmental / private sector / Community	5 phases	Workshops, training	National & International
Citystudio – Montreal	Leading the innovation process	Experiential Learning	Inter-departmental / Universities	-	Training and communication	Citystudio Global
London's Mayor Office's Urban Integration Lab	Leading the innovation process	Collaborative Experimentation / Learning	Inter-departmental / Universities	1 phase	Training, workshops, and communication	-
Barcelona Urban Lab	Facilitation, Incubating UL	Proof of concept (POC)	Private sector	- (3 phases of smart city)	-	National & International
Singapore Urban Redevelopment Authority	Facilitation, Incubating UL	Proof of concept (POC)	Private sector	-	-	National & International
Taipei Project Management Office (PMO)	Facilitation, Incubating UL	Proof of concept (POC)	Inter-departmental / private sector	2 Phases	-	National & International

Table 2. Comparison between the case-studies – the authors.

CONCLUSION

Urban labs and studios within municipalities can play an important role in assisting the city's managers and officials in their endeavors to enhance the city and achieve its goals. Urban labs, as an instrument for change and innovation, should not adhere to the traditional administrative design; instead, they should adapt to the dynamic and complex nature of city transformation. We should view urban labs as an integrated ecosystem that utilizes unconventional methods, implements a suitable and adaptable governance model, and enhances everyone involved through the exchange of knowledge and expertise. The Urban Lab model should be aligned with the city's objectives and anticipated change; its design should be considered a process that is frequently reviewed and modified rather than an end product.

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A PROTEST GARDEN: CONTESTED SPACE IN AN URBAN PARK IN SEATTLE

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INTRODUCTION

In the late spring of 2020, mass protests broke out across the United States in response to the murder of George Floyd by police in Minneapolis. In Seattle, these protests came to a climax on the night of June 8th, when the Seattle Police Department abandoned the East Precinct building in the Capitol Hill neighbourhood. Within hours, activists set up barricades and declared the establishment of an autonomous zone, the Capitol Hill Organized Protest (henceforth CHOP). This autonomous zone was centered on the only green space in the immediate neighborhood, Cal Anderson Park, and in the ensuing days, activists and community members gathered in and around the park, challenging typical spatial uses of urban American parks. Among their actions was the creation of the Black Lives Memorial Garden, which continued to exist even after the closure of CHOP on July 1st.

Over the following three years, the garden became a matter of contention between activists, community members, and the Seattle Parks and Recreation Department. This paper explores this contention as a means of discussing the underlying tension between definitions of commons and community to address how disputes in common spaces reify socioeconomic and spatial tensions in Seattle.

Spatial and Temporal Contexts

The Black Lives Memorial Garden was established within a multiplicity of contexts in urban space and socioeconomic realities in the city of Seattle. Its overall location is in the Seattle neighborhood of Capitol Hill, a traditionally gay and working-class neighborhood near the downtown Seattle business district. In the last twenty years, the neighborhood around the park has experienced increasing gentrification, with sharp declines in the poverty rate and percentage in the Black population in the neighborhood.[1] Cal Anderson Park is the primary neighborhood park within the more densely populated area of the Capitol Hill. Originally established in 1901, as a reservoir, the first iteration of the park was designed by the Olmsted Brothers and included a wading pool, field house, sand courts, and a playground. Continuing with the urban tradition of neighborhood parks as sites of active recreation, a playfield was added in 1922 on the south end of the reservoir.[2] Finally, in 2005, the reservoir was covered, and Cal Anderson Park assumed much of the shape it has to this day. Throughout much of the last fifty years, the park has also been an active site of countercultural and political actions hosting many of Seattle's earliest Pride events from the 1970s through the 2010s and

has been the origin of such political marches as the 2017 and 2018 Women's Marches in response to the Trump Presidency.

Figure 19. Original 2003 Park Plan For Cal Anderson Park. Numbers label park usage during 2020-2022: 1. camping area, 2. hang out area, 3. dog area, 4. playground, 5. garden, 6. playfields, 7. basketball court, 8. tennis court, 9. skateboard area[3]

The protests that erupted in May 2020 in Seattle came to focus on the area near Cal Anderson Park due to its proximity to the East Precinct of the Seattle Police Department (henceforth SPD). This SPD precinct was the police district most centrally located to the areas where previous Black Lives Matter protests were held in the aftermath of George Floyd's murder in May 2020; additionally, this precinct had an abnormally high number of stop-and-frisk incidents involving Black males when compared to the percentage of the Black population that lived in the area served by the precinct.[4] On June 1st, 2020, Black Lives Matters protestors began their protests near the East Precinct. These protests lasted approximately a week, with increasing police violence towards the protestors, including flash grenades and tear gas in a heavily residential neighborhood, while SPD reported that protestors were throwing bottles, rocks, and fireworks towards police positions.[5] On June 7th, an individual drove his car into the crowd of protestors and proceeded to shoot one person. Finally, on June 8th, SPD abandoned the precinct and activists declared the area the Capitol Hill Autonomous Zone (CHAZ), renamed a few days later to the Capitol Hill Organized Protest (CHOP).

Figure 20. Map of CHOP, with Cal Anderson Park toward the left side of the image and the East Precinct labeled on the map[6]

CHOP lasted until July 1st. In its early days, it had an open atmosphere that one neighbor of the park interviewed for this paper described as "Burning Man without the costumes, the dust, and the

pretension", and yet another person interviewed, a young person who was living in the park due to a lack of housing, as the most loving and accepting environment he could imagine. Activities in the area included the No-Cop Co-op, which provided food and water to anyone free of charge, kitchens providing food, conversation corners, poetry readings, music jams, memorials for victims of police violence, and artists creating murals. It was in this space that Marcus Henderson, the founder of Black Star Farmers, came and planted the Black Lives Memorial Garden, that brought together people from the neighborhood and across the city, during a distinct time of distinct isolation and mistrust in the United States amidst the COVID-19 pandemic and growing unrest due to police violence. The description of the garden as a "thick space" for creation of resistance has already been covered in detail in a recent paper by Jeffrey Hou and I will not go into exhaustive detail here.[7]

Motivation

In contrast to Hou's paper noted above, this paper focuses on the dialogue, both explicit and implicit, between garden stakeholders, neighbors, community members, and Seattle's Parks and Recreation department over the course of the three-and-a-half years of the garden's existence that led to its removal in the early hours of December 27th, 2023.

Hou focuses on the Black Lives Memorial Garden as a means of creating civil resistance and identified four ways in which the garden did so, as 1) a space of contact and mobilization, 2) a space of learning and meanings, 3) a space of refuge and relief, and 4) as a vehicle for sustaining the movement [of the Black Lives Matter Protests and food sustainability and sovereignty in Seattle].[8] In contrast, this paper seeks to understand the space of Cal Anderson Park and the garden as spatial dialogue for multiple stakeholders, inclusive of activists and garden volunteers. As such, Hou's typology above aligns with some of my own findings for those who supported the garden's continued existence, but my own findings are more extensive.

Methodology

My research consisted of analysis of the three Cal Anderson Activation Meetings held by Seattle Parks and Recreation in the summer and fall of 2020, social media analysis of the city Parks and Recreation and Black Star Farmers Instagram accounts, ethnography, and semi-structured interviews with ten individuals. Of these ten individuals, all but two live in the Capitol Hill neighborhood or the adjacent Central District. The other two individuals live in the Queen Anne and West Seattle neighborhoods of Seattle. Two individuals identify as Asian-American, one identifies as Native American, two identify as Black, and five as white. This skews somewhat differently than the population demographics of Seattle itself, which is 63.62% white, 16.84% Asian/Asian-American, 6.74% Black/African American and 0.56% Native American. Seven of the individuals identified themselves as in favor of keeping the garden, while three of the individuals did not favor keeping the garden in the park. One individual was on the board of the Cal Anderson Park Alliance. These individuals were recruited through personal networks or through public meeting minutes as individuals with strong opinions that were expressed during the 2020 activation meetings. Additionally, I met with one individual from Seattle's Parks and Recreation Department in order to understand the city's positions and thoughts on the garden.

I was clear throughout the interview process with both the individual I spoke to from Parks and Recreation and with the individuals interviewed that I personally favored keeping the garden. I moved to the Capitol Hill neighborhood in 2023, from the Ballard neighborhood of Seattle, and lived in San Francisco during the events of May and June of 2020. Undertaking this work is motivated by my personal desire to understand the deeper nuances of individual and community understandings of the spatial politics of Cal Anderson Park and the Black Lives Memorial Garden in particular.

Views and Stakeholders

As noted above, views on the park and garden were not universally shared. All respondents agreed that the reasons behind the protests (police violence and Black Lives Matter) were justified, yet there were mixed reactions and feelings to the existence of CHOP and the Black Lives Memorial Garden.

Views on Protests and CHOP

Individuals interviewed and views on social media all agreed that CHOP was a historic, singular moment, an enactment of that which Stavrides terms a *threshold space*, defined as "spaces that inventively threaten this peculiar urban order by overturning dominant taxonomies of space and life types", akin to such moments as Horts Indignants in Barcelona in 2011 and Occupy Gezi Park in Istanbul in 2013.[9] The perspectives on this moment, however, varied among individuals.

As noted in Hou, for many activists and volunteers involved in the garden, CHOP was a moment of liberation and a space for creating community. For others who lived in close proximity to Cal Anderson Park and the East Precinct, the protests that led to its creation were a moment of trauma, as tear gas wafted into the open windows of apartments and houses throughout Capitol Hill in the warm late spring of 2020 and the nightly fights between police and protestors erupted in flash bangs that reverberated throughout the neighborhood.[10] The existence of CHOP was mixed for those who felt traumatized by the violence of the protests in their neighborhood. For some individuals, they felt a shared experience of liberation and community experienced by those involved in the garden. Yet others found CHOP to be an invasion into the lifeways of their neighborhood. For the sole individual I spoke with who was camping and technically unhoused during this time, they found the protests terrifying as they were outside with no shelter during the episodes of teargassing but loved the ensuing community space that CHOP brought about. For the two individuals living outside of Capitol Hill, they did not have the strong feelings about the protests that localized individuals did.

Views on the garden and the park

For many who live close to Cal Anderson Park, and especially for families with young children and dog owners, the park is central to their lives as most housing nearby consists of apartments and condominium developments with little to no green space available. The green space the park affords, especially during 2020 and 2021, were invaluable for breaks from their homes when other space outside the house was not available for socialization.[11]

Figure 21. Summary graphs of community members' desire to continue programs in Cal Anderson Park that began during CHOP[12]

The Black Star Farmers organization and many of their allies viewed the garden as a revolutionary action with regards to claiming public space for BIPOC individuals, food sovereignty, and Indigenous land reclamation.[13] In particular, Marcus Henderson of Black Star Farmers noted that this action was to reverse the gentrification of central Seattle, with its precipitous drops in the Black population over the preceding forty years, along with the fact that Seattle itself sits on occupied and unceded territory of the Duwamish people.[14] Others in the community had different motivations for supporting the park. Families enjoyed the garden and its educational events on gardening for children. A local preschool supported the garden, and its students planted their own bed at the park. Four individuals supported the garden's existence as a continued memorial for the historic events of May and June 2020 during the protests and CHOP. Yet another individual noted that he loved the garden as a place to come and meditate on quiet mornings before the rush of his day began.

Figure 22. Contrasting views of the park. On the right is an image from those who wished the garden to be removed, and on the left, an image from those who wished the garden to remain.[15]

Three individuals in Capitol Hill, however, did not share these views on the garden and wished to see it removed so that the space they, along with the Parks and Recreation representative interviewed, termed "the Sun Bowl", could be returned to its previous plain turf, as it was previously used for Pride events in the park, movie nights in the park, and the annual Capitol Hill Garage Sale in August.[16] These three individuals also very clearly had ideas about the park as a space for neighborhood activities, with specific areas for each activity, akin to the typology of neighborhood park use described by Bachin.[17] These three individuals all strongly believed the park and its fate should be determined by individuals in the Capitol Hill neighborhood, in contrast with those who supported the garden's continued existence. Their belief, however, is not shared by Seattle's Parks and Recreation Department. For the sake of planning, Parks and Recreation have two categories of park within the City of Seattle: neighborhood parks and regional parks. Neighborhood parks are typically small, such as Cal Anderson Park, but Cal Anderson Park is designated by the city as a regional park. Most regional parks in Seattle are larger parks that draw from the entire city or metro area due to shoreline attractions on Puget Sound, Lake Union, or Lake Washington or specialized attractions such as large swimming pools, museums, or historical monuments. Cal Anderson Park, according to the representative from Parks and Recreation, is given the designation of a regional park, due to its historic importance as a center of the metro area's June Pride events, given Capitol Hill's history as a center of queer life in the larger Seattle area.

Removal of the garden and aftermath

In October 2023, Seattle Parks and Recreation announced the impending removal of the Black Lives Memorial Garden from Cal Anderson Park. From early October until the Christmas holiday, there was a near constant watch over the garden by Black Star Farmers and allies to ensure that it would not be removed. Despite a pushback and protest from many in the neighborhood, the garden was removed by Parks and Recreation employees in the early morning dark of December 27th, 2023, while many who had kept watch over the garden were visiting families for the holiday. The representative from Parks and Recreation interviewed noted that while many had submitted letters in support of the

garden, these were from the same web form posted on the Black Star Farmers' website and Instagram accounts. She noted that the Parks and Recreation Department did not give the same weight to these letters as they did to personalized letters and phone calls from stakeholders such as the Cal Anderson Park Alliance (henceforth CAPA), a "community-led stewardship organization that brings together neighbors, property owners, and other community stakeholders to ensure that Cal Anderson Park is vibrant, clean, activated, and welcoming for all."
After the garden's removal, the area was fenced off and re-turfed to a grass surface, the return to what one individual interviewed termed "lawn and order". In June 2024, CAPA, a private organization, hired an activation manager to oversee events for the portion of the park where the garden once stood.

ANALYSIS

As was noted by Gilmore in her work on parks in the Manchester-Salford area, participation and engagement for parks is key for the use and territorialization of park space by users.[18] In many case studies that threshold spaces such as CHOP and guerilla gardening movements establish community participation in parks and public space.[19] The Black Lives Memorial Garden was a piece of community building, as noted by Hou and by multiple individuals interviewed for this paper, and documented on the Black Star Farmers Instagram page. It brought together a diversity of community members with differing motivations for co-creation and support of the space and encouraged subaltern participation in an urban park surrounded by the effects of gentrification.

Figure 23. Images of individuals in and around the Black Lives Memorial Garden throughout the years from the Black Star Farmers' Instagram[20]

The garden and its allies were also in support of an often-undesired population in urban parks: the unhoused. Cal Anderson Park has long been a space where unhoused individuals have camped, as is common in many urban parks in the United States.[21] As a nexus and genesis for community and alliance building among populations that suffer from the worst impacts of gentrification in Seattle, and as a novel use of public space in a city where the legacy of park creation by the Olmsted brothers looms large, the backlash against the garden and its existence is not unique or surprising. Historical antecedents to the unhoused or unapproved uses of public space exist throughout the history of the United States. In 1830s New Orleans, newly arriving Anglo-American settlers were determined to privatize and monetize the primary public space in the Creole city, the levee, or waterfront, so as to change the levee from a home of "a species of cheap lodging-house for arriving emigrants, drunken sailors and lazy stevedores" into "an inviting promenade."[22] In his study of the history of commons space, Sevilla-Buitrago discusses how the creation of Central Park in New York City by Frederick Law Olmsted was meant to remove subsistence activities such as gardens and animal husbandry from

New York City in the 1850s, and to "soothe the nerves of visitors promoting contemplative, passive forms of recreation, and exerting 'a distinctly harmonizing and refining influence upon the most unfortunate and lawless classes.'"[23] Deutsche in her book *Evictions* notes that the gentrification of the area around Jackson Park in New York City resulted in a privatization of the park by owners of multi-million dollar properties surrounding the park, and Mitchell notes the same pressures in the protests and pushback against the changes to People's Park in Berkeley from a park occupied by the unhoused to one occupied by sports facilities for the adjacent University of California campus.[24]

CAPA claims that by working with the city in partnership, it is the community that is creating a "clean" park for all to enjoy. Even if CAPA aspires to be "egalitarian and anti-authoritarian", its role behind the removal of the garden, with its creation of common space and the participation of diverse and subaltern populations in its creation and maintenance, demonstrates that CAPA does not represent the community as a whole, but rather a fraction of it.[25] Sevilla-Buitrago notes that in the neoliberal policies of post-1970s Milan, the language of the urban planners responsible for gentrifying and undermining the work of the working-class activists of the 1960s and 1970s was done so by co-opting the language and methods of the earlier activists in order to create the argument that gentrification is planned and supported by the *community*. This community, however, is one that excludes those who do not agree with those who have money and those with the ear of city politicians, as clearly demonstrated in Seattle with the attempt to establish a playground near a popular clothing-optional beach on Lake Washington. In this instance, a wealthy homeowner with views of the beach wanted to ban nude users from the beach and used influence with the city's current mayor to do so.[26]

CONCLUSION

The removal of the Black Lives Memorial Garden and the process for doing so remains opaque. Those who wanted the "park to remain a park" prevailed, returning the park to its previous state as a place of "active recreation."[27] Those who participated in growing and maintaining the garden – activists, Black and Indigenous gardeners, preschoolers – no longer have access to it as a space for engaging with other residents of Seattle and Capitol Hill, and for forming community with those whom they very likely do not have other reasons to engage in projects with.[28] Users that engaged with the space for movie nights already had already begun to use the park in 2022 for movie nights, while those that used it for the garage sale returned in 2024.

Seattle's Parks and Recreation Department created an "official" Black Lives Memorial Garden in a park deep in the heart of Seattle's traditionally Black neighborhood of the Central District, in a park named for civil rights leader Martin Luther King.[29] In doing so, they performed an act of segregating city residents once again and re-enforcing the gentrification of Capitol Hill and Cal Anderson Park as a space for mostly white upper middle-class residents. This new official garden is not one filled with native plants to recognize Indigenous struggles against occupation and colonization, nor is it filled with plants designed for consumption – both omissions that downgrade the cause of food sovereignty that was central to the original BLM garden.

Public space in Seattle remains a struggle for what writer Primo Moroni terms a "right to places of self-management of one's own intelligence, one's own culture, and ... one's own life."[30] Possibilities of consensus and engagement for public space have shown success in the cases of Stapelbäddsparken and Plantparken in Malmö and in the management of cultural centers in Barcelona.[31] Without a stake in public space via engagement, activity, or the ability to play a role in charting its future, the diversity of common people in the heterogenous 21st century American city who do not agree with the normative beliefs in the role of parks in public life will continue to remain without voices in the spatial politics of these same cities they inhabit.

NOTES

[1] Trisha Romano, “Cultures Clash as Gentrification Engulfs Capitol Hill,”, *Seattle Times*, March 13, 2015, https://www.seattletimes.com/life/lifestyle/culture-clash-on-capitol-hill/, accessed June 20, 2024; “Mapping Race and Segregation in Seattle and King County 1940-2020”, Civil Rights & Labor History Consortium, University of Washington, https://dept.washington.edu/labhist/maps-race-seattle-shtml.
[2] For more on the typology of uses in American urban parks, see Robin Bachin, “Cultivating Unity: The Changing Role of Parks in Urban America”, *Places*, Summer (2003): 12-17.
[3] “Cal Anderson Park: Crime Prevention Through Environmental Design,” Seattle Parks and Recreation (2016), https://seattle.gov/documents/departments/parksndrecreation/projects/calanderson/calandersoncpted-assessment.pdf, accessed June 2nd, 2024.
[4] Seattle Police Department, “Stops and Detentions Annual Report, 2018”, https://seattle.gov/documents/Departments/Police/Reports/2017-Stops-and-Detentions-Final.pdf ; “Mapping Race and Segregation”
[5] Reports on escalating police violence are from interviews; James Ross Gardner, “A Seattle Activist’s Fight to Keep the Focus on Police Abuse,” *The New Yorker*, June 12th 2020, accessed May 29th, 2024.
[6] “Archiving the CHOP”, Humanistic GIS Laboratory, University of Washington, https://hgis.uw.edu/chop/, accessed June 14th, 2024.
[7] Jeffrey Hou, “Seattle’s CHOP Guerilla Garden as a ‘Thick’ Space of Civil Resistance,” *Local Environment*, 28, no. 2 (2023): 189-202.
[8] Hou, “Seattle’s CHOP Guerilla Garden,” 194-199.
[9] Stavros Stavrides, “Common Space as Threshold Space: Urban Commoning in Struggles to Re-appropriate Public Space,” *Footprint: Commoning as Differentiated Publicness, Spring* (2015): 9-20; Laura Calvet-Mir and Hug March, “Crisis and Post-crisis Urban Gardening Initiatives from a Southern European Perspective: The Case of Barcelona,” *European Urban and Regional Studies* 26, no. 1 (2019): 97-112; Burcu Yigit Turan, “Occupy Gezi Park: The Never-Ending Search for Democracy, Public Space, and Alternative City-Making,” *City Unsilenced: Public Space and Urban Resistance in the Age of Shrinking Democracy*, ed. Jeffrey Hou and Sabine Knierbein, (Routledge, 2017).
[10] Most housing in Seattle does not have air-conditioning due to its historically mild climate and residents typically open windows once the temperatures reach the 60s Fahrenheit. During the week of the protests, the daily highs were above 60F. Weather Underground, https://www.wunderground.com/history/weekly/us/wa/seatac/KSEA/date/2020-6-2 , accessed July 29th, 2024; The flash grenades used throughout the protests were very loud in even my memory. During the height of the pandemic between March and July 2020, I was on nightly Zoom calls with close friends while I lived in San Francisco. One of these friends lived approximately six blocks from Cal Anderson Park and eight from the East Precinct and even on a Zoom call, the noise was startling, as my friend kept his windows open in the warm weather.
[11] COVID restrictions were far stricter in Washington State than in most of the United States, or globally. Schools did not reopen in Seattle until April 2021, and capacity restrictions due to COVID were not rescinded in Washington State until June 30th, 2021.
[12] Seattle Parks and Recreation, ““2020 Cal Anderson Park Community Presentation: Public Meeting 2 – Inventory, Synthesis, and Prioritization,” September 10th 2020.
[13] Black Star Farmers (@blackstarfarmers), “This section [of the garden] is purely for Black and Indigenous farmers and a lot of people have been asking me about this… why? It’s about creating space for Black people and Indigenous people in a white environment where they feel stressed and unable to join in the conversation and to really contribute their voices. In order to facilitate reverse gentrification and normalize things… to create a new normal, we need to create space. And here’s a space for Black people to contribute their garden knowledge.”, Instagram, June 14th 2020, https://www.instagram.com/blackstarfarmers/?hl=en, accessed June 2nd 2024; “Today’s post is focusing on the Black and Indigenous planting that has been receiving a lot of criticism for being racist and supporting segregation. First of all, this is not racist. It is anti-racist. In order to create a dialogue one must create space for others to express themselves,” Instagram, June 16th 2020, https://www.instagram.com/blackstarfarmers/?hl=en, accessed June 5th 2024.
[14] Daniel Beekman, “Seattle’s Plan to Remove Cal Anderson Park’s BLM Garden Draws Pushback,” *Seattle Times*, October 11th 2023, https://www.seattletimes.com/seattle-news/politics/seattle-plans-to-remove-cal-anderson-parks-blm-garden-draws-pushback/, accessed June 10th 2024; the Duwamish people are a federally unrecognized Coast Salish

tribe whose ancestors dwelt on the land that is now the City of Seattle, including the Duwamish chief for whom the city is named.

[15] Seattle Parks and Recreation, “Public Meeting 2 – Inventory, Synthesis, and Prioritization.”

[16] During the years of the garden’s existence, Pride events moved to nearby Volunteer Park and stayed there even in 2024 after the garden’s removal. Movie nights during the years of the garden’s existence were on the larger grassier area near the north end of the park, but returned to the area of the garden in 2024; One individual I spoke with who grew up and spent most of their adult years (they are currently 41 years old) in Seattle, including spending time in Capitol Hill as a teenager and living here as an adult claims that he had never heard the term “Sun Bowl” for the area where the garden was located.

[17] Bachin, “Cultivating Unity.”

[18] Abigail Gilmore, “The Park and the Commons: Vernacular Spaces for Everyday Participation and Cultural Value,” *Cultural Trends*, 26, no. 1 (2017): 34-46.

[19] Stavrides, “Common Space as Threshold Space”; Calvert-Mir and March, “Crisis and Post-crisis Urban Gardening”; Yigit Turan, “Occupy Gezi Park”; Abigail Gilmore and Luciana Lang Reinisch, “Materializing the Intangible Through Talking, Walking, and Making: Interdisciplinary Methods for Cheetham Park, North Manchester,” in *Doing Research on Participation: Methods and Data for Understanding Everyday Participation* (2019); Beata J. Gawryszewska, Maciej Lepkowski, and Anna Wilcszynska, “City Wastelands: Creating Places of Vernacular Democracy,” in *Urban Gardening and the Struggle for Social and Spatial Justice*, edited by Chiara Certomà, Susan Noori and Martin Sondermann, (Manchester University Press, 2019); John Crossan, Andrew Cumbers, Robert McMaster, and Deidre Shaw, “Contesting Neoliberalism Urbanism in Glasgow’s Community Gardens: The Practice of DIY Citizenship,” *Antipode* 48, no.4 (2016): 937-955.

[20] Black Star Farmers (@blackstarfarmers), “#fbf nearly one year ago at the @checodistrict plant sale! see y’all this Sunday 4/16 from 11-3 at Cal Anderson Park for this year’s plant sale. We will be bringing native perennial plants that we have been nursing for many months. 🔔 We will *not* be charging for plants, our proposed pricing scale will be to honor our labor and to cover material costs. No one will ever be turned away for lack of funds. Plants and people belong together 💞”, Instagram, April 14th 2023, https://www.instagram.com/p/CrCLBJYvzNM/?hl=en; “😅 Posting hella late but y’all gotta see these gatherings - full of joy, babies, dialogue, skillshare, FOOD, relationship & community building, and of course, being together with the land.We just had our July event on the 9th and feel so full from all the connections that were made. We hope to see you at our weekly stewarding hours at MLK FAME (2-6PM) and BLMG (3-6PM) on Thursdays. Our next large gathering will be the second Sunday in August! Hope to see you before then :)”, Instagram, July 12th 2023, https://www.instagram.com/p/CunAF0bycAo/?hl=en&img_index=1; “Day 5: Thank you to all the BIPOC gardeners and allies that came out to work this weekend! We appreciate you all feeling inspired to join us in this movement. All are welcome - bring your friends! The garden is growing exponentially each day - we’ve got some exciting projects on the horizon. Stay tuned!
#blackstarfarmer#chopseattle #blacklandmatters #reclaimtheblock #seattleprotests #blackgirlmagic #blacklivesmatter #bipocgardeners #blackgardeners”, Instagram, June 15th 2020,
https://www.instagram.com/p/CBctjjUpdQo/?hl=en&img_index=1

[21] Nick Pitas, Jeff Rose, Lauren Mullenbach, and Zack Russell, “Unhoused Users in Parks and Public Greenspace: An Intergroup Conflict Approach,” *Landscape and Urban Planning* 249 (2024): 105-113.

[22] Dell Upton, “The Master Street of the World: The Levee,” in *Streets*: *Critical Perspectives on Urban Space*, edited by Zeynep Celik, Diane Favro, and Richard Ingersol (University of California Press, 1994); Abraham Oakey Hall, *The Manhatter in New Orleans; or, Phases of “Crescent City” Life,* ed. H.A. Kamen Quote from page 283, Abraham Oakey Hall, *The Manhatter in New Orleans; or, Phases of “Crescent City” Life,* edited by H.A. Kamen (Kessinger Publishing, 2009), 5.

[23] Álvaro Sevilla-Buitrago, *Against the Commons*: *A Radical History of Urban Planning* (University of Minnesota Press, 2022), 87.

[24] Rosalyn Deutsche, *Evictions: Art and Spatial Politics* (MIT Press, 1996), 276-277; Don Mitchell, “The End of Public Space? People’s Park, Definitions of the Public, and Democracy,” *Annals of the Association of American Geographers*, 85, no. 1 (1995): 108-133.

[25] Stavrides, “Common Space as Threshold Space,” 12

[26] Vivian McCall, “Mayor Bruce Harrell and Denny Blaine Donor Texted about the ‘Problem of Nudity’ at Nude Beach,” *The Stranger*, July 18th 2024,
https://www.thestranger.com/news/2024/07/18/79609668/mayor-bruce-harrell-and-denny-blaine-donor-texted-about-the-problem-of-nudity-at-nude-beach, accessed August 10th 2024.

[27] Deutsche, *Evictions,* 277; Bachin, “Cultivating Unity,” 16.

[28] While it has been noted in medical literature that Americans are increasingly isolated socially, especially after the COVID-19 Pandemic, it has been particularly noted in Seattle. From personal experience, the so-called "Seattle Freeze" is a real thing, where people do not generally go out of their way to make new friends or community. Christine Claridge, "Loneliness is lifting – but maybe not in Seattle," *Axios*, April 7th 2023, https://www.axios.com/local/seattle/2023/04/07/seattle-loneliness-pandemic-isolation**,** accessed August 10th, 2024; Mary Lonegran-Cullum, Stephanie A. Hooker, Robert Levy, and Jason Ricco, "A New Pandemic of Loneliness," *Journal of the American Board of Family Medicine*, 35, no. 3 (2022)|: 593-596.

[29] Rachel Shulkin, "Statement on the Removal of the Cal Anderson Garden," *Parkways: Seattle Parks and Recreation* (blog), December 27th 2023, https://parkways.seattle.gov/2023/12/27/statement-on-the-removal-of-the-cal-anderson-garden/, accessed June 14th 2024.

[30] Primo Moroni, "Militarizzazione del Ticinese," in *La luna sotto casa: Milano tra rivolta existenziale e movimenti politici*, ed. John N. Martin and Primo Moroni (Milan: Shake, 2007), 195.

[31] Peter Parker and Staffan Schmidt, "Commons-Based Governance in Public Space: User Participation and Inclusion," *Nordisk Arkitkturforskning* 3 (2016): 117-142; Santiago Elzaguirre Anglada, "Cultural Commons as a key for Bottom-linked Policies: An Exploration of the Support for Public and Community Partnerships in Barcelona," *on the w@terfront. Public Art. Urban Design. Civic Participation. Urban Regeneration* 64, no. 12 (2022): 3-39.

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