SPOOL



Evidence & Method #1

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Editorial

3 **Design and Method in Architectural Research**
From Objective Quantification to Material Speculation
Lara Schrijver, Frank van der Hoeven

Articles

5 **Artistic Practices as Architectural Research**
Valerie Hoberg

21 **On File and As File**
Tracing Communicative Processes in the Byker Archive
Heidi Svenningsen Kajita, Katie Lloyd Thomas

37 **On Dreaming Realities**
Cultural critique, design speculation and full-scale mock-ups
Ionas Sklavounos

57 **Design of Co-creation in Rotterdam Central Station (1996-2007)**
Architecture and urban design roles in the multi-stakeholder collaboration
Manuele Triggianese

Visual Essays

73 **Untangling Stakeholder Dynamics in Circularity of the Built Environment**
A Comics-Based Approach
Ellen Verbiest, Julie Marin, Bruno De Meulder, Andrew Vande Moere

87 **Collective data-based drawings**
A common ground for adaptive contributive design
Lucia Jalón Oyarzun, Rubén Valdez, Tiphaine Abenia, Aurèle Pulfer, Malcolm Onifade, Emmanuelle Augustoni, Dieter Dietz

105 **Retrieving landscape**
Drawing(s) as key to the development of alternative biographical readings of Nanhai in the Pearl River Delta
Hong Wan Chan

Field Notes

121 **Design against Extinction at New York University**
Peder Anker, Mitchell Joachim

SPOOL - Journal of Architecture and the Built Environment

SPOOL is a journal initiative in the field of 'architecture and the built environment'. It puts a strong emphasis on specific topics, so-called threads: Landscape Metropolis; Energy Innovation, Cyber-physical Architecture, Narratives, Evidence & Method, and Expo. These topics refer to existing and upcoming research programmes/interests in Europe and beyond, and ensure a steady stream of potential copy. Treating these topics as threads within one journal allows SPOOL to focus on the interrelationship between the fields, something that is often lost in specialised journals. SPOOL welcomes within this framework original papers and associated open data on research that deal with interventions in architecture and the built environment by means of design, engineering and/or planning.

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Front:Three (ancestral) houses in transformation, drawing by Hong Wan Chan. Back: Hans Hollein's Monument to the Victims of Holocaust'.

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EDITORIAL

Design and Method in Architectural Research: From Objective Quantification to Material Speculation

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This issue of SPOOL introduces a new thread: 'Method and Design', titled "Design and Method in Architectural Research: From Objective Quantification to Material Speculation". The issue explores the conventional understanding of method through both theoretical contributions and visual essays. The theoretical contributions discuss methodology, material practice, studio approaches, or design principles. The visual essays are more experimental, allowing for design proposals or artistic expressions that explore specific methods, depict scenarios, or articulate a material logic.

The history of establishing reliable research methods in architecture is fraught with uncertainty, influenced by cultural habits, individual opinions, subjective positions, and institutional incentives. It is the story of a field that has aimed to establish its objectivity while still preserving the individual horizon of creative solutions.

A modern, positivist approach to theory and science might argue that this complicated history is little more than an indication of the unreliability of research approaches in architecture. This issue, instead, argues that approaches rooted in perception and material reality provide a situated understanding with its own merits. What if the idiosyncratic habits of drawing and design are considered an index of collective values and intentions? What if scientific relevance is measured by a variety of specific observations rather than quantifiable or reproducible results? What if drawings can provide an approach similar to laboratory experiments, with a hypothesis iterated in multiple possible outcomes?

The possibility that the materials of architectural design themselves may provide a foundation for methodological innovations seems intuitive from within the discipline of architecture, where drawings and diagrams are a self-evident mode of inquiry. At the same time, current habits of scientific research leave limited space for this explorative approach. With this issue, we aim to show that architecture is particularly suited to provide new modes of academic inquiry. Studio training develops skills such as spatial projection and scenario thinking, requiring visual and diagrammatic renditions of spatial intentions. Moreover, the design process explores a series of possible solutions, and these narratives of possible futures explore the values they wish to encourage or constrain. It is this blended condition, materialized in drawings and models, that this issue focuses on as a valuable trajectory for architectural research.

The contributions included in this issue support our hypothesis that a new thread on 'Method and Design' is fertile ground for a range of systematic and methodical approaches. SPOOL thus provides space for expanding our notions of scientific research.

The issue starts with Valerie Hoberg, who explores practical examples from art and architecture spanning the 20th and 21st centuries, shedding light on artistic practices that, apart from enhancing designerly qualities

and fostering a reflexive approach, have a significant research impact in architecture. Heidi Svenningsen Kajita and Katie Lloyd Thomas delve into the communicative processes between residents, architects, and other parties, as found in the lists and letters of the archive of the Byker Redevelopment in Newcastle Upon Tyne. They reconstruct how mainstream practice collected and filed residents' experiences and understanding of their homes and how, through the circulation of those papers, residents' notes were also embedded in the design process. Ionas Sklavounos delves into the installation designed by Hans Hollein for the Künstlerhaus facade in Vienna in 1985. By doing so, he discusses how such speculation entails the physical replication of carefully chosen 'historical' forms and their reassembly in what would be best described as a 'fragmentary whole. Manuela Triggianese explores the pivotal role of design as a decision-making tool within multi-stakeholder collaborations, focusing on the early phases of the Rotterdam Central Railway Station and its surroundings project.

Next, we continue with contributions where drawing takes center stage. Ellen Verbiest, Julie Marin, Bruno De Meulder, and Andrew Vande Moere explain how comics function as a narrative assemblage method for critical analysis, bringing together different data sources and rendering their research process on circularity contextual and visual. Lucia Jalón Oyarzun, Rubén Valdez, Tiphaine Abenia, Aurèle Pulfer, Malcolm Onifade, Emmanuelle Augustoni, and Dieter Dietz explain how the methodology of ALICE (Atelier de la Conception de l'Espace) evolved to include data-based drawing techniques, skillfully merging precise surveying with qualitative data analysis, thereby bridging the gap between quantitative and qualitative facets of design. Hong Wan Chan focuses on two methods employed in the selection, interpretation, and representation of diverse source materials for developing alternative biographies for her ancestral landscape - Nanhai district in the Pearl River Delta in southern China.

The issue closes with a contribution from Peder Anker and Mitchell Joachim. The particular qualities of the eco-social design work of students at the Gallatin School of Individualized Studies at New York University that evolved over the last decade led us to add a new section to SPOOL: Field Notes, which will allow for contributions that explore new territory at the forefront of design.

We would like to extend our gratitude to our external reviewers, on behalf of all our authors, editors, and readers, for your willingness to provide thoughtful and constructive reviews.

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Artistic Practices as Architectural Research

Valerie Hoberg

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Abstract

The potential of implicit architectural knowledge extends beyond the realm of sciences and technology. It is worthwhile to examine its role in art, artistic practices, and artistic knowledge. This article explores several practical examples from art and architecture, spanning the 20th and 21st centuries. These examples shed light on artistic practices that, apart from enhancing designerly qualities and fostering a reflexive approach, may have a significant research impact in architecture. The methods, processes, and topics of these examples are examined, and their potential for critical improvement is highlighted. Particularly, the concept of 'not-knowing' is emphasized as a valuable asset for addressing contemporary and future challenges, not limited to architecture.

Keywords

design and research; art; art in architecture; Artistic Research; artistic knowledge; artistic experiment; reflexivity; Reflexive Design; repetition; difference

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1 INTRODUCTION

It can be considered a truism that exclusively equating 'research' with the natural sciences and 'knowledge' with facts, quantifiability, and objectivity falls far short of the mark. In fact, the opposite holds true, as scientific research is inevitably reliant on creative action, imagination, and serendipity. The philosopher of science Hans-Jörg Rheinberger, following the anthropologist Claude Lévi-Strauss, refers to a 'savage' thinking mode that is both preliminary and parallel to abstract thinking. He places this 'savage' thinking, characterized by experimentation in the unknown, at the core of his theory of science (Rheinberger, H.-J. (2003)). In this view, research can even be likened to artistic work, which, as Lévi-Strauss posits, falls between science and handicrafts [bricolage], primarily involving the manual creation of objects that also serve as objects of knowledge (ibid., p. 38).

Rethinking research and knowledge in this manner is by no means a new concept, and over the last three decades, it has been examined with particular intensity in architecture. This has been especially prominent since Christopher Frayling introduced the canonical triad of 'research into/through/for art and design' in 1993 as research paths within creative disciplines (Frayling, C. (1993)). This perspective allows for broader avenues of research, attributing inherent forms of knowledge to the media, processes, methods, and products of creative work and design (Buchert, M. (2014)). Nevertheless, what is unique about this tacit knowledge in architecture, as well as its production and application within the discipline, remains a topic of active research[1]. Notably, its potential lies in domains beyond what can be scientifically and technically controlled (ibid., pp. 28 and 42–44). In this context, it is worth exploring artistic practices and artistic knowledge.

One could argue that artistic practice generates unique perspectives that engage with and reflect upon specific issues, thereby suggesting alternative ways of thinking and acting. Art does not aim to provide definitive answers but rather to present a diverse spectrum of (im-)possible viewpoints on the current reality – the 'known.' Undoubtedly, knowledge is produced in art, albeit a form of knowledge that is challenging to fully describe, explain, or make entirely explicit. Art deals with, produces, and communicates knowledge in various ways and different forms (Busch, K. (2016), pp. 11–14 and 23). This artistic knowledge and distinctive mode of thinking are not limited to the realm of art alone but can also contribute value to other disciplines.

Below, we explore the potential of artistic research practices in architecture by examining practical examples from the 20th and 21st centuries, where art and architecture intersect. These examples encompass a wide range of content and methodologies. The primary objective here is not to delve into the contentious debate surrounding artistic research but rather to investigate the productive connections between disciplines (Henke, S., Mersch, D., Meulen, N. van der, Strässle, T. & Wiesel, J. (2020), pp. 18–27): What goals, methods, and qualities can be pursued and established through artistic practices within architecture? How are they supported theoretically and methodologically, and what makes them effective in terms of research and knowledge generation? Furthermore, what characterizes this unique form of knowledge, and what additional value does the artistic bring to bear on the future challenges facing the field of architecture?

1 Cf. e.g., the innovative, international EU-funded research network 'TACK / Communities of Tacit Knowledge: Architecture and its Ways of Knowing', focusing on the specific knowledge that architects use when designing buildings and cities, running from 2020-2023. https://tac-it-knowledge-architecture.com, 05.02.23 and further: Schrijver, L. (ed.), (2021). The Tacit Dimension: Architecture knowledge and scientific research. Leuven University Press. https://doi.org/10.2307/j.ctv1mgm7ng

2 ART AND ARCHITECTURE: INTERWEAVINGS

The relationship between art and architecture is characterized by a wide range of interfaces in which not only creative intentions but also conceptual and exploratory aspects come into play. Particularly since the 20th century, art has been distinguished by its engagement with interdisciplinary discourses in both the production of its works and its influence on them (Slager, H. (2009), p. 51). Artistic endeavors situated at the intersection of art and architecture can take on diverse forms. These endeavors may, among other things, resemble built architecture, employ architectural mediums, or produce performative and installation-based works that address content equally relevant to both disciplines. This content might encompass everyday life, sensory perception, light, material, and, most notably, space.

Exploring space, in particular, provides numerous examples of how artistic methods are employed in architecture to cultivate alternative understandings that lead to novel construction methods, spatial organizational forms, or materials. As early as 1941, in 'Space, Time, Architecture,' the architectural historian Sigfried Giedion underscored the potential of artistic work in reshaping the perception of space and the necessary evolution of means of expression. Giedion cited Le Corbusier's cubist paintings as an exemplar, where the boundaries between interior and exterior blur, and where lines and surfaces give rise to painted architecture (Giedion, S. (1992), pp. 527–529). Surreal strategies and cubist dissections evolve into a form of spatial exploration that architects then translate into physical structures. Consequently, Giedion attributes to artistic creations the imaginative capacity to foreshadow technical and constructive insights.

3 FUTURE CONSTRUCTIONS

Particularly notable examples of this creative capacity can be found in the drawings and paintings of the architect Zaha Hadid. Influenced by the Russian avant-garde, particularly the 'Architektona' by the constructivist artist Kasimir Malevich, Hadid initially worked in a two-dimensional, painterly format. The space that emerged in her work appeared as if in a state of explosion or tension. It took several years before Hadid was able to realize her first building, the Vitra Fire Station in Weil am Rhein in 1991, where the space, now translated into a constructed form, articulated a tensed line of movement.

Zaha Hadid's subsequent work also fundamentally evolves through drawing. The fluid impression characterizing her later buildings finds its roots in drawings influenced by Hadid's initial training as a mathematician or by Arabic calligraphies (Höfler, C. (2020), pp. 73–94). Her drawing movements are synonymous with movements through space and, therefore, deviate from conventional architectural drawings. They do not depict what is built but instead emphasize its impact and perception. For Hadid, her artistic work—drawing and painting—offers a realm of abstraction and imagination. The three-dimensionality of space is not a challenge to overcome but can be deconstructed and reassembled within its Cartesian dimensions. It need not adhere to conventional structures or materials.



FIGURE 1 Hadid's design for the Phaeno Experimental Museum in Wolfsburg in 2005.
Image credits: Richard Bartz (https://commons.wikimedia.org/wiki/File:Phaeno_Suedseite_RB.jpg), CC-BY-SA 3.0.

For instance, the flowing, landscaped spatial environments in Hadid's design for the Phaeno Experimental Museum in Wolfsburg in 2005 required the exploration and development of self-compacting concrete, a material rarely used at the time (Höppner, M. & Malcherek, J. (2002)) (Fig. 01). An alternative space is conceived and made achievable through the process of drawing. Hadid liberates herself from existing realities and their limitations. This drawing practice extends beyond envisioning future realizations in standard design processes. Drawing and painting, in this context, serve as more than mere contemplative design accompaniments since they do not solely address the 'solution' to a particular task.

Drawing from a diverse range of influences such as fine arts, mathematics, or calligraphy, a form of situated knowledge becomes embedded within these drawing gestures. Although this knowledge may be inherently personal, its integration into the drawings, which function as interpretable mediators, enables a contribution to the collective dimension—specifically, in the realm of material research. The structures thus newly achievable may subsequently prompt further inquiries into spatial exploration through drawings. Knowledge acquired through artistic practices possesses the capacity to reformulate other practices, thereby opening doors to further exploration (Bertram, G.-W. (2018), p. 143).



4 DEVIATIONS

The architectural office Ensamble Studio employs a similar 'questioning' approach, utilizing artistic-experimental models or mock-ups to explore alternative material qualities and construction methods while integrating automation and addressing existing contexts such as landscapes or existing building structures. Through a series of experimental studies, they replicate natural forming processes, among other things. The resulting aesthetic characteristics are not intended to be rationalized; chance and receptiveness to the final outcome are integral to the experimental design. Realizing such experimental work necessitates architects relinquishing some degree of control (Hoberg, V. (2022), pp. 85–89).

Even in their built projects resulting from model studies, like the 'Structures of Landscape,' which comprises monumental concrete structures for the Tippet Rise art center in Fishtail, Montana (since 2016), the ultimate outcome is not entirely predetermined. Débora Mesa, one of the principals of the office, explicitly asserts that only by encouraging improvisation and situational adaptation, typically associated more with art, can the non-designable emerge (Gil, I., Garcia-Abril, A. & Mesa, D. (2021), p. 148). It involves a departure from conventions that leads to new possibilities and modes of comprehension. However, this departure extends beyond the aesthetic realm. By acknowledging the non-determinable as a ubiquitous factor in processes, they attain flexibility and sovereignty in handling deviations.

5 (NOT-)KNOWING OF ART

Ensamble Studio's methodical approach, marked by clear structure, facilitates the production of multiple and varied outcomes through repetitions. In a parallel to scientific experiments, one could describe these as artistic experiments. The central distinction here lies in the fact that while scientific experiments typically seek to validate a pre-established hypothesis and depend on reproducibility, artistic experiments aim to discover deviations within repetition. Failure is perceived as a quality, and the contemplative exploration of these deviations yields productive knowledge in the realm of artistic experimentation (Mersch, D. (2009), pp. 40–43, and Rheinberger, H.-J. (2005), pp. 58–61).

In both cases, a generally accepted body of knowledge serves as the starting point for the purpose of deviation, resulting in the creation of new knowledge: Hadid's space diverges from conventional Cartesian space, and Ensamble Studio's concrete takes on qualities of lightness, textile characteristics, and an almost lively quality. This inclination towards 'not-knowing' can be seen as emblematic of art. Each work offers a unique perspective on what remains unknowable, contributing further differentiation. The act of creating art entails constant differentiation (ibid., pp. 43–46), a concept that partially applies to architectural design as well. In architecture, a design is rarely ever considered final and unalterable, but rather as the best among the variants developed during the process.

From this perspective, knowledge appears less as something absolute and ultimately correct, and more as something adaptable. Even scientific knowledge must be understood as a reflection of the contemporary state of knowledge and the interpretations it generates. Furthermore, advancements in tools and media shape the possibilities of investigation and representation. Hence, knowledge is seldom static, fixed, or unchanging.

6 NARRATIVES

Particularly in the context of time-dependent frameworks, such as historical and cultural understandings, it becomes evident how much knowledge is shaped by human narratives. The ways in which this knowledge is documented, interpreted, presented, and commented upon can significantly alter perspectives on various issues. This approach can be observed in the work of Smiljan Radić's architectural firm, which incorporates numerous references to art and various artistic practices as integral components of architectural work. These references are episodically linked to designs and buildings, forming a complex network.

The Chilean context plays a significant role in Radić's work. It is characterized by a tumultuous political history, notably marked by the 1973 military coup leading to dictatorship and neoliberal experiments. This history, in turn, has led to diverse cultural influences, combined with the distinctive geographical setting, landscapes, and natural forces of Chile. Nevertheless, Radić asserts that describing Chile as the 'end of the world' is a narrative construct, as untouched nature no longer exists there either (Radić, S. & Fujimoto, S. (2016), p. 306).

Embracing the notion of Chile as the 'end of the world,' Smiljan Radić deliberately avoids attempting to conform to a supposed Chilean historical narrative with his architectural works. Instead, he constructs alternative interweavings into Chilean identity, cultural history, and everyday life experiences. These interweavings draw from shared, or perceived as such, impressions as well as Radić's individual observations.



FIGURE 2 'Parasol i kobieta' by Tadeusz Kantor, 1967
Image credits T adeusz Kantor, 1967 (https://commons.wikimedia.org/wiki/File:Kantor_T_Parasol_i_kobieta.JPG), CC-BY-SA 3.0.



FIGURE 3 Smiljan Radić: NAVE, Santiago de Chile. Image credits: Valerie Hoberg



FIGURE 4 Smiljan Radić: Teatro Biobío, Concepción. Image credits: Valerie Hoberg

Radić's publications often feature personal photographs capturing temporary everyday structures, like small shrines, market stalls, or makeshift dwellings—structures that may exist only briefly. These photographs are then linked to various references, such as the inflatable constructions by groups like Haus-Rucker-Co, artworks by the artist Constant related to his anti-capitalist urban utopia 'New Babylon' (1959–1974), or 'Emballages,' various artistic disguises by the versatile artist Tadeusz Kantor (Fig. 02).
Through the combination of texts, supplementary drawings, models, or photographs, narratives of an 'unnoticed' everyday Chilean story emerge. These narratives speak to transience, adaptability, constant transformation, and the veiled and the invisible. Radić conceptually and creatively transfers these aspects into his own architectural designs (Hoberg, V. (2021)). His buildings are characterized by contrasts and incorporate elements that disrupt conventional perception: for instance, a circus tent atop the roof of the gutted existing building housing the Centre for the Performing Arts in Santiago de Chile (2015), situated in the midst of a dense urban setting. Another example is the nearly entirely shrouded, yet translucent theater in Concepción (2018), functioning as a guiding lantern in an unframed urban space. Here, the interplay of movement behind the façade creates a spectacular shadow play (Fig. 03 + 04).

This approach highlights the ambiguity within narratives that are often presented in an unambiguous manner. In the realm of architecture, this provides an opportunity to delve into various, sometimes unconscious, aspects of places, to introduce historical or other narrative layers, and to shift focus. It results in an alternative perspective on places, which can enhance design processes. Furthermore, it can serve as a variant of on-site research or participatory observation, yielding not numerical data sets but rather emotional and associative insights about a place. The goal is to create a sense of alienation from content that is often assumed to be familiar, leveraging this feeling of detachment to prompt new ways of seeing and thinking. The acknowledgment of alienation, as described by curator Hans-Ulrich Obrist in relation to Radić as a "collision of non-identical thought systems" (Obrist, H.-U. (2019), p. 290), can lead to the productive generation of paradoxes, forming a part of a primarily artistic reflexivity.

7 ARTISTIC REFLEXIVITY

Reflexivity is a term present in various scientific discourses and has been described, for instance, by social scientist Pierre Bourdieu or within the context of the so-called second or reflexive modernity, explored by sociologists such as Ulrich Beck, Anthony Giddens, and Scott Lash (Buchert, M. (2014), pp. 34–36, and Beck, U. (1996)). Reflexivity can be understood as a theory of practice that encompasses an awareness of both shared and individual knowledge. It enables critical reevaluation of disciplinary conventions, encourages self-reflective distance, and fosters the imagination of alternative courses of action. In practical contexts, a reflexive approach can serve as a bridge between the past, for diagnostic purposes, and the future, for prognostic purposes, thereby offering stimulating qualities (Buchert, M. (2022), p. 14).

By the early 20th century, reflexivity had become an almost indispensable mode in art. The focus of the arts had shifted away from the representation of ideals or the imitation of reality. Art had to embark on a self-examination process to gain insights into the causes, goals, and methods of artistic activity (Gamm, G. (2007), pp. 38–40). In addition to reflecting on one's own actions, it implies thinking relationally for artists (Bourdieu, P. (1992)). One's own position is situated in relation to other disciplinary positions. Only then does it become effective beyond an individual perspective, potentially stabilizing, questioning, or critiquing, and perhaps even transcending disciplinary boundaries. As a result, reflexivity enables a change in perspectives through distancing and can lead to changes in actions.

It can be asserted that artistic practices and forms of knowledge employing reflexivity can provide starting points for contemporary (and future) challenges, which may appear to require solutions grounded solely in scientific knowledge. For instance, issues related to resources—such as sustainable materials, soil, and existing infrastructure—are not solely ecological, legal, or engineering concerns. Artistic reflexivity and its associated capacity to grapple with complexity and identify knowledge gaps enable the recognition of the need for innovation and the proposal of improved alternatives. Art offers practical reflections (Bertram, G. W. (2018), pp. 147–150).

8 (INVISIBLE) NORMS

In this context, the works of conceptual artist and architect Gordon Matta-Clark reveal critical potential. Matta-Clark engaged with the deconstruction of the architectural discipline under the term 'anarchitecture.' Through his 'splittings' and 'cuttings,' which involved large-scale incisions initially assembled in drawings and photos and subsequently executed on obsolete buildings, Matta-Clark not only created unconventional spatial states and perceptions but also uncovered unexpected functional potential within existing structures. Simultaneously, his works served as a critique of the failed structures that had arisen as a result of the economic and urban development of modernity—essentially, a form of artistic-reflexive modernization. This critical aspect was further heightened in his conceptual work 'Reality Properties: Fake Estates' (1973–74).

Matta-Clark acquired 15 so-called 'gutterspaces,' unusable residual properties, through auctions in the state of New York. He collected archival materials, maps, and plans related to these properties, intending to employ them in 'anarchitectural' interventions. However, due to his untimely death in 1978, these plans were never realized, and the properties reverted to the state of New York. These plots of land became an even more pronounced critical commentary on (land) ownership and urban space: they were physically existing areas but possessed no 'physical value' within the capitalist logic of exploitation because they could not be utilized. These areas only became real estate through their representation in documents.

This conceptual deconstruction towards 'anarchitecture' holds renewed significance in light of contemporary urgencies. It prompts questions about the conventions and rule-based behaviors that hinder not only added value but also necessary revisions. These questions extend beyond the realm of architecture and can impact fundamental systemic inquiries. They encompass the role of (land) ownership, the potential uses and obligations it entails, the coexistence of private actions with collective spaces and needs, and the responsible management of resources, especially land. These queries span a range from surveys to critiques, unveiling divergent interests, inequalities, and unintended consequences of regulations.

Artistic work primarily highlights these various forms of disparities, without necessarily implying or being capable of offering solutions within the fields of art and architecture alone. It is the perceptible difference, the paradox, that triggers impulses for action—sometimes even beyond the sphere of architecture. In this capacity, artistic research can serve as a tool for other disciplines.

9 INSECURE FOUNDATIONS

And overarching, there is also the question of what role architects play at all: What is the (self-) understanding of the discipline? Are architects 'merely' designing executors or can they have a say in determining systems as agents? This confrontation with systems and the often heterogeneous constellations they contain can be seen as a future challenge not only for architecture: people and human culture have always been integrated into complex systems and thus are not confronted with, but part of a shared world. The increasingly networked, globalized world makes these dependencies clear; currently via climatic tipping points, economic and migrant consequences of war, or a global pandemic. Conditions that are taken for granted, foundations that assure the community and somewhat predictable futures are becoming more and more unstable, so that everyday life and normality have to be thought of much more flexibly.

This evolution seems to represent a contradiction in terms of architecture, which produces 'im-movables' and was already characterized by the ancient architectural theorist Vitruvius, among other things, by 'firmitas' (solidity). The artistic can offer an approach here by detaching from structural realization and strengthening the speculative dimension inherent in architecture: Prognostic constellations are inscribed in perceptions of reality and can change these – and consequently knowledge and actions – in particular through sensitization with regard to the (not) possible (Buchert, M. (2022), p. 22, and Bertram, G. W. (2018), pp.130–144)).

10 ARCHITECTURE AS A HYPOTHESIS

The interdisciplinary team at the office OMA seems to have possessed not only prognostic but almost prophetic abilities when they began to address the topic 'Hospital of the Future' some years ago—a topic that rapidly gained relevance with the onset of the Covid-19 pandemic. Set up as an ongoing research project, it has, among other things, resulted in a scenographic installation at the Venice Architecture Biennale in 2021. At the Biennale, an artistic short film on a 'hospital revolution' was showcased. The film intricately weaves together facts, current megatrends, and speculative questions, employing dialectic comparisons. This narrative is underscored by historical photographs and plans, as well as collage-like visualizations that appear associative and, at times, almost humorous due to their montage.

A myriad of contemporary and complex topics are interwoven, all converging under the overarching theme of 'healthcare.' These topics encompass technological progress, population aging, prevalent diseases, the collection of digital data, automation, circular economy, urban development, locality, nature, and (mental) well-being. Especially in the context of the Biennale installation, where hospital beds and curtain walls simulate the rather uncomfortable staging of a makeshift hospital, larger, abstract questions come to light: How do we coexist in a resilient, future-oriented, and environmentally friendly manner? The hospital serves as the typology through which these questions are addressed in an exemplary fashion; the architecture in this artistic installation, therefore, serves as their litmus test.

11 EXPERIENCING KNOWLEDGE

In OMA's hospital project, the research potential of architecture becomes evident, particularly in artistic works. People are accustomed to perceiving, reading, and interpreting architectural arrangements, often without consciously noticing or being able to describe them precisely. It is a tacit embodied knowledge acquired through bodily presence in architectural spaces. Architectural means are thus well-suited for expressing the consequences of changing conditions and abstract implications. In the context of climate change, there is considerable potential in architectural creations that speculatively depict life experiences, illustrating the intangible, long-term threats and their repercussions.



FIGURE 5 'Oasis No. 7' by the architecture and art group Haus-Rucker-Co. Image credits: © VG Bild-Kunst 2023, Photo: JeLuF (https://commons.wikimedia.org/wiki/File:Documenta_5,_Fridericianum.jpg), CC-BY-SA 4.0.

Early examples of this approach can be found in architectural visions from the 1960s and 70s, which envisioned minimal, nomadic adaptive living. An example is 'Oasis No. 7' by the architecture and art group Haus-Rucker-Co, an air-filled bubble that hung parasitically from the Museum Fredericianum during Documenta 5 in Kassel in 1972. This intervention provided a different experience of the city, altering perceptions of inside and outside, private and public. However, it's worth noting that the symbolic emergency exit led only to an illusion of freedom (Borries, F. von (2010), p. 139). This intervention served as a critique, transforming growing environmental pollution and the fear of life-threatening catastrophes into an idealized architectural refuge that was simultaneously even more artificial than the human cultural landscape 'outside' from which it aimed to protect. It was an artistic questioning of circumstances, convictions, and conventions, including architecture's 'firmitas' (Fig. 05).

12 ART AS A WAY OF THINKING: HOW WE CAN KNOW WHAT WE DON'T KNOW

What unites these examples of artistic methods, works, and knowledge in the context of architecture is their focus on what is not yet known. This does not mean that they are striving towards anticipated knowledge, but rather that the artistic process serves to elaborate on knowledge as something yet unknown. In this way, artistic knowledge is not an increase in knowledge but rather an increase in ignorance, or even a conscious embrace of the unknown.

Highlighting differences, (re)interpreting, critiquing, and even engaging in imaginative speculation are practices primarily directed at what we have yet to discover, what we may have forgotten, or what remains uncertain. Artistic reflexivity provides a means to delve into this realm of not-knowing. By confronting traditions, existing creations, and comparing with imprints and objectives, artistic insights can serve as a form of research within architecture (Buchert, M. (2022), p. 25).

These insights can lead to innovations in spatial design, materials, and construction techniques, influence cultural and historical perspectives, invent new typologies, deconstruct established norms and routines for renovation, and serve as critical theses in other disciplines.

13 CONCLUSION

To establish the artistic as a productive and research-oriented method in architecture, it requires a repetitive process and a concurrent, comparative mode of thinking that structures, selects, and reorients. Furthermore, it necessitates an articulation of the implicit knowledge contained within it—not necessarily in written form but rather in architectural form, whether it be manifested in built structures, books, exhibitions, or other forms of media. In this way, artistic works in architecture can serve as not only a creative force that fosters novel forms of expression and imaginative environments but also as a means of research. By creating a sense of distance from the familiar, they intentionally cultivate a state of ignorance, which, in turn, enables access to the ‚other.' It is a form of implicit, sensory, and poetic (not-)knowing. The ultimate objective remains unclear, and the impact is open-ended, yet by no means without direction.

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On File and As Files

Tracing Communicative Processes in the Byker Archive

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Abstract

In this paper, we piece together threads of communicative processes between residents, architects, and other parties, as found in the lists and letters of the archive of the Byker Redevelopment in Newcastle Upon Tyne (1968-83). Documents that are usually discarded or neglected by architectural researchers - from a stack of various papers documenting residents' lists of complaints, evaluative papers such as an audit report, and architects' memos, to a resident's letter of complaint - enable us to reconstruct, first, how a mainstream practice collected and filed residents' experiences and understanding of their homes, and second, how, through the circulation of those papers in action as files, residents' notes were also embedded in the design process.

Keywords

archives, materiality, participation, architectural design process, post-World War II housing

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1 "Extra Work" in the Byker Archive

To manage just one housing project, the Byker Redevelopment in Newcastle Upon Tyne (1968-83), Ralph Erskine's Sweden-based architecture practice established a UK branch office right at the heart of the development area. Thanks to the fact that the office files have been kept in their entirety according to the architects' wishes, we have been able to piece together threads of communicative processes between residents, architects, and other parties as they appear across many boxes in the archival shelves of the RIBA Collection in London (Figure 1) and, to a lesser extent, in the collection at ArkDes in Stockholm. Trawling through the files, we do not seek to know more about the history of designing Byker per se. Instead, we focus on micro-data that can tell us something about how these papers first register, then circulate residents' voices and concerns. We make use of notes and documents usually discarded or neglected by architectural researchers - from a stack of lists and letters of residents' complaints, through evaluative papers such as an audit report, to architects' memos.[1] Through patient reading and good fortune, we were able to follow across the files how one resident's experiences were registered. This example helps us understand how these papers enabled residents' experiences to enter the design process.



FIGURE 1 The extensive Byker files in RIBA Collections, London. With the archive still largely un-catalogued, and in any case too vast for systematic review, we approach these files through an iterative–inductive research process. Photograph: Ewan Harrison, 2020.

1 See also: Kajita, H. S. 'When they feel they've got a beef': Building on Residents' Complaints in the Byker Archives. *Scroope*, 32, (in review); Kajita, H. S. (2023). Gossip and Complaint: Ways of (Re-)Producing the Social in Housing "Expertly." In A. Migotto & M. Tattara (Eds.), *Contested Legacies: Critical Perspectives on Post-war Modern Housing*. Leuven University Press; and, Kajita, H. S. (2022). Urgent minor matters: Re-Activating archival documents for social housing futures. *Architecture and Culture*, 10(3), 483–511. https://doi.org/10.1080/20507828.2022.2093603. The research for these complementary papers was conducted for the project "(Im)Possible Instructions: Inscribing Use-value in the Architectural Design Process" funded by Independent Research Fund Denmark (GRANT_NUMBER: 9032-00006B - IPD) with Newcastle University and University of Copenhagen (2019-23).

The City of Newcastle Upon Tyne had, for years, pushed for a tabula rasa approach to Byker's redevelopment, typical of post-World War II modernist planning. However, with Ralph Erskine's Arkitektkontor AB's influence, Byker marked a shift towards contextual and publicly engaged architecture and planning, as broadly advocated by anti-authoritarian movements in Europe and specifically promoted in policies such as the UK's Skeffington Report on participation in urban planning.[2] In Sweden, the architectural office had gained popularity for their democratic approach to welfare state-sanctioned housing programs. They approached large-scale housing projects with an interest in considering the close ties of local communities. They were inspired by what has since been described as the Swedish model, which "gently intervenes in everyday life and restructures social relations,"[3] where welfare state citizens "should be made to desire the appropriate things, so as to generate a control that would also emerge from below."[4]

At Byker, around 2,000 new homes gradually replaced the existing Victorian terraced housing in a phased redevelopment, while structures such as churches, clubs, and baths were retained. The iconic Byker Wall and the low-density housing it enclosed were designed to support small "gossip groups," and in the early years, the architects advocated for as many of the existing tenants as possible to stay in the area to preserve the neighborly community spirit.[5] Famously, the team of architects led by project architect Vernon Gracie set up their office in the middle of the redevelopment area to work closely in contact with the residents (Figure 2). Going beyond the fact of the architects' proximity to the community, we seek to learn more about exactly how they engaged with residents and let this work inform the design process.

Starting out with the Pilot Scheme in the southern part of the estate, the architects experimented with various methods for informing and communicating with the local residents who were moving into this new low-rise housing. This community involvement came to influence the long-term rolling program of the entire estate, throughout which the architects continuously experimented with communication and information.[6] Thus, the records provide particular insights into the architects' varying efforts of community involvement. Gracie, according to one of the other architects working in Byker, Michael Drage, described that the acclaimed community involvement of Byker Redevelopment relied less on the small annual budget for participation than on the enthusiasm and goodwill of the team and residents.[7] A letter found in the archive explains that such engagements with tenants were considered "extra work" - an additional workload to their formal architect and planning consultant roles, which made the office uneconomical financially. Importantly, however, the architects defined this extra work to be integral to their professional obligation.[8]

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2 Skeffington, A. M. (1969). *People and planning: Report of the Committee on Public Participation in Planning*. HMSO

3 Mattsson, H. and Wallenstein, S.O (2010). Introduction. In Mattsson, H. and Wallenstein, S.O. (Eds.). *Swedish Modernism: Architecture, Consumption, and the Welfare State* (p.20). Black Dog Publishing.

4 Hirdman, Y. quoted in Mattsson, H. and Wallenstein, S.O (2010). Introduction. In Mattsson, H. and Wallenstein, S.O. (Eds.). *Swedish Modernism: Architecture, Consumption, and the Welfare State* (p. 16). Black Dog Publishing.

5 While there are both positive and negative reports about the success of the architects' aspirations for continued sense of belonging and community spirit (see for instance reports by Sirrka-Lisa Kontinnen, Peter Malpass and Mavis Zutshi listed in this article's reference list), the architects' aims to retain the majority of existing residents during the redevelopment are generally understood not to have been fully met.

6 For a full description of the design phases of Byker Redevelopment, see: Drage, M. (2008). "Byker: Surprising the Colleagues for 35 Years – A Social History of Ralph Erskine's Arkitektkontor AB in Newcastle." *Twentieth Century Architecture: The Journal of the Twentieth Century Society*, 9: 148–162.

7 Drage, M. (2008) Byker: 153. In the text, Drage also refers to Gracie, V. J. (1984). Pitfalls in Participation. In Hatch, R. C. (ed.). *The Scope of Social Architecture* (pp.186-201). Van Nostrand Reinhold.

8 Paraphrased from: Purchess, C., Letter to the Industrial Co-ownership Movement. Byker, RIBA Collections. See also the architects' expression of interest, Erskine, R. (1968) Byker: Newcastle, 1968. Byker, RIBA Collections.

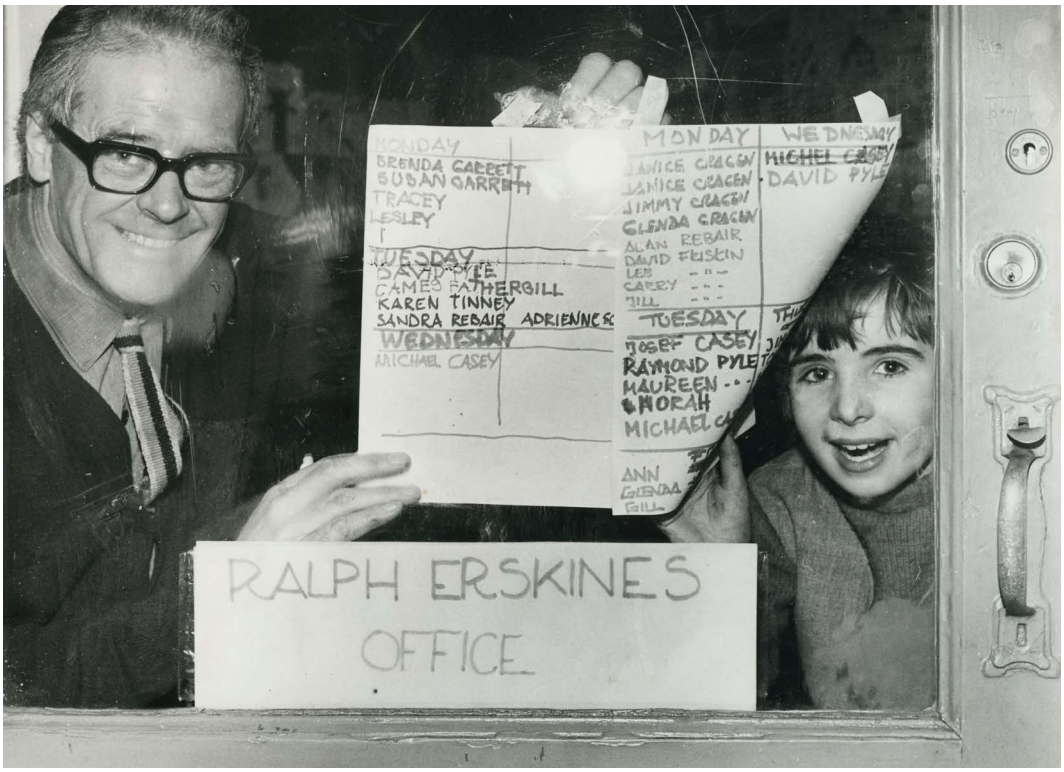


FIGURE 2 Byker Ralph Erskine tillsammans med ett barn [Byker Ralph Erskine with a child]. Arkitektur- och designcentrum, Stockholm. (Link to download and terms of license: https://digitaltmuseum.se/011015013688/byker-ralph-erskine-tillsammans-med-ett-barn)

In this paper, we turn to the special kinds of "participation" documents filed in the archive under the "Pilot Scheme" that facilitated information exchanges with residents continuously over time. We refer to this as a "communicative process." We focus on the minutiae of specific details, such as oral and written complaints which are often overlooked in architectural research in favor of more generalizable values. In the archive, we discovered notes about issues like creaking floorboards and other noise-related concerns, which serve as illustrations of the numerous minor matters raised by residents.[9] While these concerns are important, this paper centers less on *what* the residents complained about and more on *how* (if) these records – essentially, these fragments of additional work for both architects and residents – were integrated into the practice's creation of more formal building information.

With the archive still largely uncatalogued and, in any case, too vast for systematic review, we approach these files through an iterative-inductive research process. We piece together shreds of material evidence, aided by media theory, case literature, and our own backgrounds in architectural history and Heidi's practice-based research. Taking inspiration from Cornelia Vismann's (2008) media materialist approach, we view the office files as more than just repositories of information. They grant us access not only to the individual documents *on file* but also to the temporality of the dynamic process through which they were accumulated *as files*. Through this research, we explore how files interweave information that is often treated as belonging to separate domains – whether it pertains to practice, social concerns, or architectural history. From this standpoint, we seek to comprehend architectural objects in terms of their production and utilization, recognizing that these processes involve communication and information that extend beyond the architect's office.[10]

9 For more about the different lists and letters see Kajita's texts listed in note 1.

10 Ockman, J. (2015). Foreword. In Deamer, P. (ed.). *The Architect as Worker: Immaterial Labor, the Creative Class, and the Politics of Design* (pp. xxi-xxvi). Bloomsbury. : xxi

In our research on the peculiarities of the Byker files, we seek to understand how communication between architects and tenants was facilitated. We ask how tenants' desires, complaints, and material practices were documented, and, more importantly, we explore the mechanisms and processes through which these were considered in the design process. This paper first demonstrates how the architects' collection and compilation of residents' written complaints into lists allowed residents' experiences to traverse the files and become part of the discourse among architects and other professionals. Secondly, it highlights that both architects and residents gained experience and confidence in this process, with residents even taking the initiative to address the architects directly through self-initiated and more extended letters.



FIGURE 3 Visual transcription from snapshot of Mr McGuiness' list of complaint September 30th 1971. Original in Byker, RIBA Collections, London. By Heidi Svenningsen Kajita, 2023.

2 Moving Across the Files

In 1971 residents who had recently moved into their homes in the Pilot Scheme were requested by the architects to provide lists of complaint. Handwritten on various kinds of note papers, ranging in how detailed and refined they were, these lists were part of a continuing exchange of information.[11] One example is a list submitted by Mr McGuiness, 9 Janet Square (1971). (Figure 3). "Dear Sir," he wrote, "Please find below a list of faults in the above address which you requested."[12] McGuiness made a personal address to Mr Erskine and continued with a series of points:

> 4 Kitchen unit doors badly chipped. Mr R Erskine said would be replaced. These doors were faulted on day of occupying house | Creaking floorboards becoming increasingly worse | Crack in wood surround of one-bedroom window frame | 2 cracked tiles (horizontal) at end of bath also all radius corner tiles surrounding bath breaking loose as bath settles [...] [13]

Continuing, McGuiness made a suggestion for "future 4PA (type) houses to have a larger door between the kitchenette and outhouse. Tall persons continually hit their head on top of the doorway." This showed his awareness that there was room for design improvements in the next phase of the design. McGuiness documented specific issues with various objects, such as doors, floors, window frames, and more, detailing breakages, creaks, cracks, and unsatisfying dimensions. It's worth noting that McGuiness indicated the list was written upon request. From other documents, we know that his specific points were part of discussions with neighbors at collectively organized meetings.

In Byker, the Pilot Scheme Residents' Association went beyond the architects' request for lists of complaints and collectively pursued "a small number of relatively minor matters," including faulty construction, repair work, maintenance, vandalism, and nuisances from overcrowded shared spaces.[14] As seen in Mr. McGuiness's complaint about the chipped kitchen unit doors, Mr. Erskine's promise to replace them had not been fulfilled. It's common for complaints to get stuck in bureaucratic systems, and, as in other collectively organized housing, there are numerous instances of Byker residents' frustration with such obstacles, sometimes even leading to protests. For example, on one occasion, residents withheld their rent for a week due to poor municipal maintenance practices. According to local press clippings and stories, the Byker community is well-known for its mutual support structures despite inadequate public services, both then and today.[15]

11 Some lists appear to have been hastily scribbled. Other lists, such as Mr McGuiness', are neatly composed, and yet others are sparsely informed merely listing single words on the back of scrap papers. The lists and letters of complaint are located in business files with a broad variety of documents from questionnaires and other documents used in participatory process to notes about the architects' office organisation and invoices.

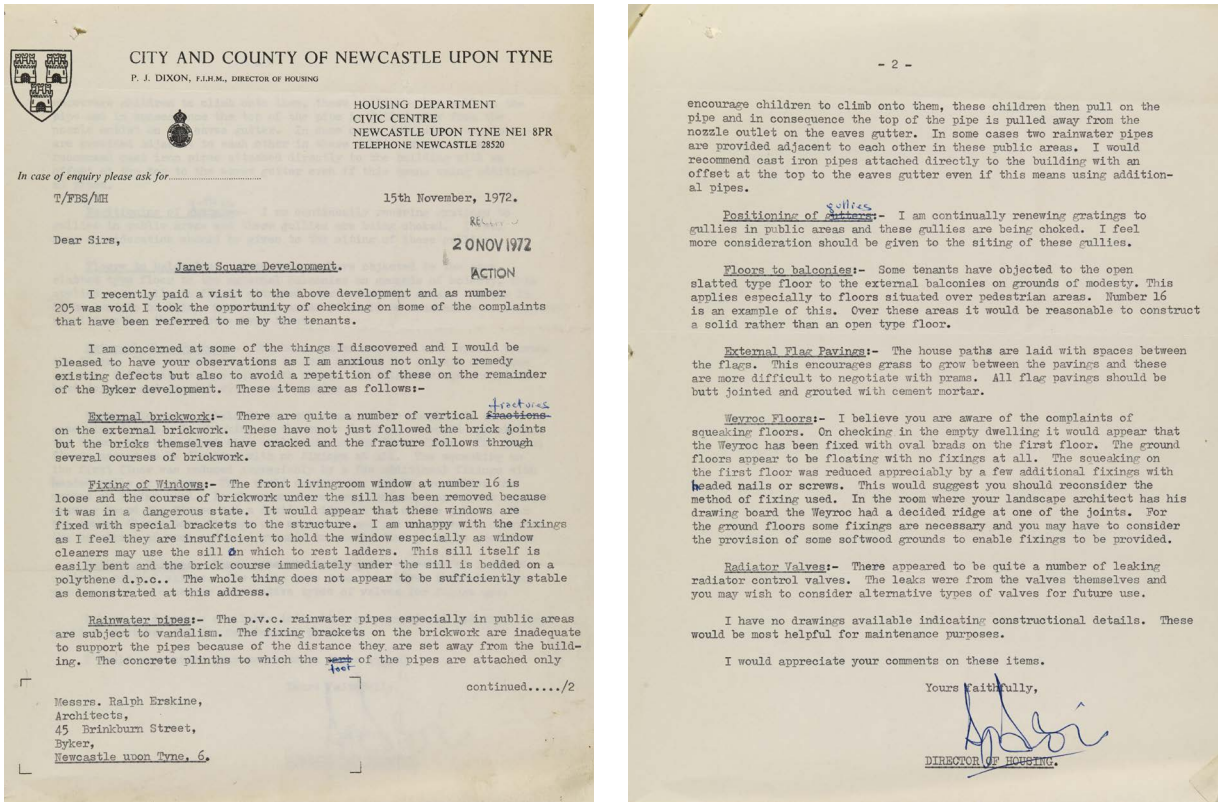
12 McGuiness, J.. *List of complaint*, September 30th, 1971. Byker, RIBA Collections.

13 Ibid.

14 M. JG/BA. Housing Committee: Byker, Pilot Scheme, draft. May 24, 1972. Byker, RIBA Collections, London also cited in Kajita (2022) "Urgent Minor Matters".

15 E.g. Hannah Graham (2017): Life on the Byker Wall Estate: What it's really like to live in 'best neighbourhood in UK'. In *Chronicle Live*. Nov 11. Accessed September 15, 2023, https://www.chroniclelive.co.uk/news/north-east-news/life-byker-wall-estate-what-13888970. See also the local residents' magazine *Byker Phoenix*. Selected issues can be accessed in Byker, ArkDes Collection.

As we approached the archival boxes, we also encountered more typical "participation" documents, such as user manuals and questionnaires. However, we did not anticipate finding the personal lists and letters among them. This discovery reminded us of Vismann's insight that files "appear in all shapes and forms."[16] They can be loose pages, found in little boxes, wrapped in packing paper, enclosed in capsules, bundled together with string, or organized as vertical folders ready to hold anything that fits between two paper covers. To understand how the various sheets of paper, which recorded specific objects, faults, concerns, and nuisances submitted by residents of different households, contributed to the architects' design processes, we needed to read across this diverse range of materials, cross-referencing both social and technical documents.



CITY AND COUNTY OF NEWCASTLE UPON TYNE

P. J. DIXON, F.I.H.M., DIRECTOR OF HOUSING

HOUSING DEPARTMENT
CIVIC CENTRE
NEWCASTLE UPON TYNE NE1 8PR
TELEPHONE NEWCASTLE 28520

In case of enquiry please ask for.....

T/FBS/MH

15th November, 1972.

RECEIVED
20 NOV 1972
ACTION

Dear Sirs,

Janet Square Development.

I recently paid a visit to the above development and as number 205 was void I took the opportunity of checking on some of the complaints that have been referred to me by the tenants.

I am concerned at some of the things I discovered and I would be pleased to have your observations as I am anxious not only to remedy existing defects but also to avoid a repetition of these on the remainder of the Byker development. These items are as follows:-

External brickwork:- There are quite a number of vertical ~~fractures~~ fractures on the external brickwork. These have not just followed the brick joints but the bricks themselves have cracked and the fracture follows through several courses of brickwork.

Fixing of Windows:- The front livingroom window at number 16 is loose and the course of brickwork under the sill has been removed because it was in a dangerous state. It would appear that these windows are fixed with special brackets to the structure. I am unhappy with the fixings as I feel they are insufficient to hold the window especially as window cleaners may use the sill on which to rest ladders. This sill itself is easily bent and the brick course immediately under the sill is bedded on a polythene d.p.c.. The whole thing does not appear to be sufficiently stable as demonstrated at this address.

Rainwater pipes:- The p.v.c. rainwater pipes especially in public areas are subject to vandalism. The fixing brackets on the brickwork are inadequate to support the pipes because of the distance they are set away from the building. The concrete plinths to which the ~~pipes~~ feet of the pipes are attached only

continued...../2

Messrs. Ralph Erskine,
Architects,
45 Brinkburn Street,
Byker,
Newcastle upon Tyne, 6.

- 2 -

encourage children to climb onto them, these children then pull on the pipe and in consequence the top of the pipe is pulled away from the nozzle outlet on the eaves gutter. In some cases two rainwater pipes are provided adjacent to each other in these public areas. I would recommend cast iron pipes attached directly to the building with an offset at the top to the eaves gutter even if this means using additional pipes.

Positioning of ~~Gullies~~ gullies:- I am continually renewing gratings to gullies in public areas and these gullies are being choked. I feel more consideration should be given to the siting of these gullies.

Floors to balconies:- Some tenants have objected to the open slatted type floor to the external balconies on grounds of modesty. This applies especially to floors situated over pedestrian areas. Number 16 is an example of this. Over these areas it would be reasonable to construct a solid rather than an open type floor.

External Flag Pavings:- The house paths are laid with spaces between the flags. This encourages grass to grow between the pavings and these are more difficult to negotiate with prams. All flag pavings should be butt jointed and grouted with cement mortar.

Weyroc Floors:- I believe you are aware of the complaints of squeaking floors. On checking in the empty dwelling it would appear that the Weyroc has been fixed with oval brads on the first floor. The ground floors appear to be floating with no fixings at all. The squeaking on the first floor was reduced appreciably by a few additional fixings with headed nails or screws. This would suggest you should reconsider the method of fixing used. In the room where your landscape architect has his drawing board the Weyroc had a decided ridge at one of the joints. For the ground floors some fixings are necessary and you may have to consider the provision of some softwood grounds to enable fixings to be provided.

Radiator Valves:- There appeared to be quite a number of leaking radiator control valves. The leaks were from the valves themselves and you may wish to consider alternative types of valves for future use.

I have no drawings available indicating constructional details. These would be most helpful for maintenance purposes.

I would appreciate your comments on these items.

Yours faithfully,

DIRECTOR OF HOUSING.

FIGURE 4 'Letter to the architects from Director of Housing regarding the Janet Square Development. Dated 15th Nov 1972. Byker, RIBA Collections, London.'

In the Byker files, complaint notes have been stapled and hole punched – they have been made ready to be kept on file as valuable information. Looking further through the files we find that these notes were later transferred to and compiled in architects' typed lists: a single cross-referenced document shows how some detailed information was retained and other information was edited out. In the reworked version, summarised in the architects' words, Mr McGuiness' complaint now reads as follows:

16 Vismann (2008). *Files*: xi

9. Janet Square

No noise insulation, cupboard door chipped, and nail heads coming through, lock on door insecure, cracks in window frames, floors creaking, heat regulator not working, radiators clanking when heating up. Beading coming off cupboards. No handrail on outside stairs.[17]

The architects' summary was further mediated through other documents exchanged between the architects and the housing department, which described the need for further investigation, rectification, or changes to the design of later phases. We discern how the "creaking floorboards" mentioned in McGuinness's list – just one of many minor issues raised in residents' complaints about their housing – was addressed in design evaluations and technical documents. By tracing records related to the floors, our aim is not to provide a representative account of events but rather to gain insight into the recording devices used in these communicative processes. We contemplate the gap between formal building information and the highly specific, individualized concerns of residents at any given time. Our example illustrates how we can interpret these historical files as mediators of various voices. Recognizing the specificities of the filed complaints allows us to understand how locally formed relationships were maintained and carried through into the bureaucratically regulated decision-making processes of experts and professionals. Some concerns are retained as information, while others are left behind. As Vismann explains, lists serve as more than an account of events: listing is a process aimed at regulating things.[18]

By 1972, complaints from McGuinness and others about squeaking floors had reached official ears, along with more general concerns about noise levels from residents of Janet Square. The Director of Housing documented these issues in his list of concerns from a site visit as follows (figure 4):

Weyroc Floors: – I believe you are aware of the complaints of squeaking floors. On checking in the empty dwelling it would appear that the Weyroc has been fixed with oval brads on the first floor. The ground floors appear to be floating with no fixing at all. The squeaking on the first floor was reduced appreciably by a few additional fixings with headed nails or screws.[19]

Noise issues were further investigated in an audit by the Chief Public Health Inspector (1972) and found to be caused in part by children's play and social gathering in the shared spaces between buildings, but concerning the floors the inspector advised the Director of Housing that it would be:

practical to take steps to increase the insulation value of the floors after ensuring that the present construction is not faulty in any way. In particular, [he writes] I am thinking of creaking floor boards or spaces between floor board ends and walls and similar situations where the noise can by-pass the insulation.[20]

17 Erskine, Ralph. *Byker Pilot Scheme*. No date. Byker, RIBA Collections.

18 Vismann (2008). *Files*: 6

19 Director of Housing.Janet Square Development. Dated 15th Nov 1972. Byker, RIBA Collections.

20 Chief Public Health Inspector, Memorandum. Dated 18th Sep 1971. Byker, RIBA Collections.

The architects responded to this matter in a letter to the Director of Housing, stating that they would find a new solution to fix the Weyroc floors in later phases of the redevelopment. And so on.

Following the thread of the creaking floors, we can observe how residents' lists of complaints – representing their lived sensibilities towards their environments – feed into the lists and memos of the architects, public health officer, and the Director of Housing. Across various files, these lists function as directives for the next steps. Lists generate files, and in this process, they "sort and engender circulation."[21] These lists transfer specific information between various parties, preparing it for consideration in the revised design and realization of the built fabric of the Pilot Scheme houses and in subsequent phases.

The specific communicative processes developed by the Byker architects enabled them to engage beyond the concerns of a single client and encompass the multiple concerns of numerous residents. As Erskine stated when discussing dialogues with residents in a 1975 radio show, "I don't think I am redefining the role of an architect. I am just extending the traditional role that one has always had with a specific client to a more general client."[22] In response to the interviewer, Jeremy Bugler, who questioned the participation processes in Byker, Erskine clarified that it was not a "populist solution derived through long meetings and discussions with the local people… No Byker person has been given a fine-point pen and a set square and told to design his own house."[23] In Byker, the architects created the plans, specified the materials, and managed the construction processes, and they were not directly instructed by residents. Instead, they were influenced by residents through continuous exchanges that took place on-site and over time. Erskine explains:

> The comparison I have always made when I first started working as an architect, I was quite often doing private houses, one family houses. Now it was obvious there that you talked to the father, the mother and if you were interested and the family was of that type, you would talk to the kids as well and the whole time you were planning the house you discussed with them the plans, you adjusted the plans you exchanged ideas with them, they tried to influence you and you influenced back; and that is nothing new. The only rummy thing, the curious thing I think is that this hasn't been done in these larger commissions.[24]

Within the Byker archives, lists of complaints, architects' instructions, memos, and other documents illustrate how residents' evaluative comments, although infrequently, influenced decision-making about design through formal building information. These documents were preserved on file, enabling the architects to access information both in Byker and in different projects at a later date. Therefore, the function of a document on file is not fixed; it can be mobilized differently in changing contexts. Consequently, the Byker files offer us insights into communicative processes before, during, and after they are objectified in the construction information they inform.

21 Vismann (2008). *Files*: 6

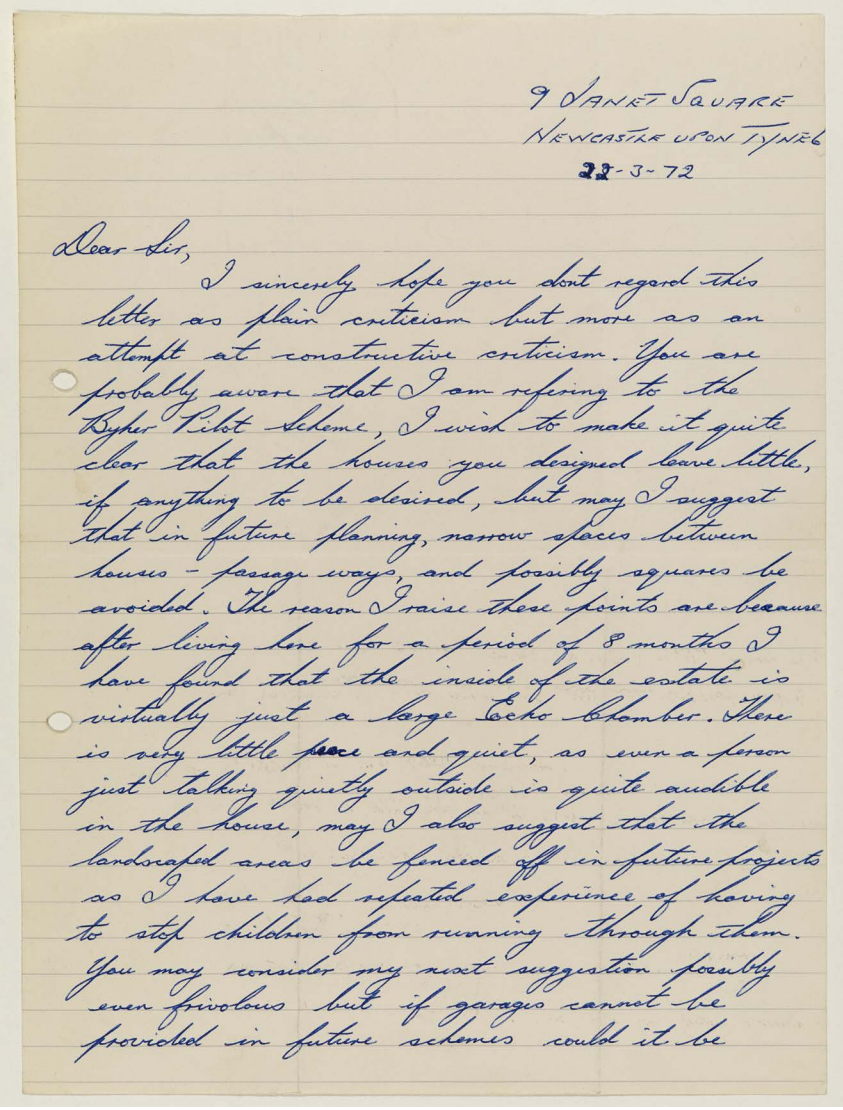
22 Ralph Erskine quoted in Bugler, J. *This Island Now*, Transcript of radio broadcast, March 20th, 1975. Byker, ArkDes Collection: 13.

23 Bugler (1975). *This Island Now*: 13

24 Ralph Erskine quoted in Bugler (1975). *This Island Now*: 13

3 Accumulated Experience

The residents' complaints about the pilot project also had a broader impact on the architects' design approach. The architects gained experience in eliciting and incorporating residents' insights into the design process. Furthermore, through providing feedback about their homes, residents became adept at articulating their experiences. For instance, the issue of noise in the high-density housing was a common concern raised by residents. However, it was influenced by a variety of factors and could not be resolved solely by addressing material specifications and construction. Residents didn't limit their engagement to providing written feedback about the design of their dwellings only when prompted by the architects. They also took the initiative to initiate broader inquiries through letter-writing. For example, a letter written to the architects by Mr. McGuiness in 1972, approximately six months after his initial list, outlines a more extensive set of concerns (refer to Figure 5 and Figure 6). He began his letter with "Dear Sir" and continued:



9 JANET SQUARE
NEWCASTLE UPON TYNE 6
22-3-72

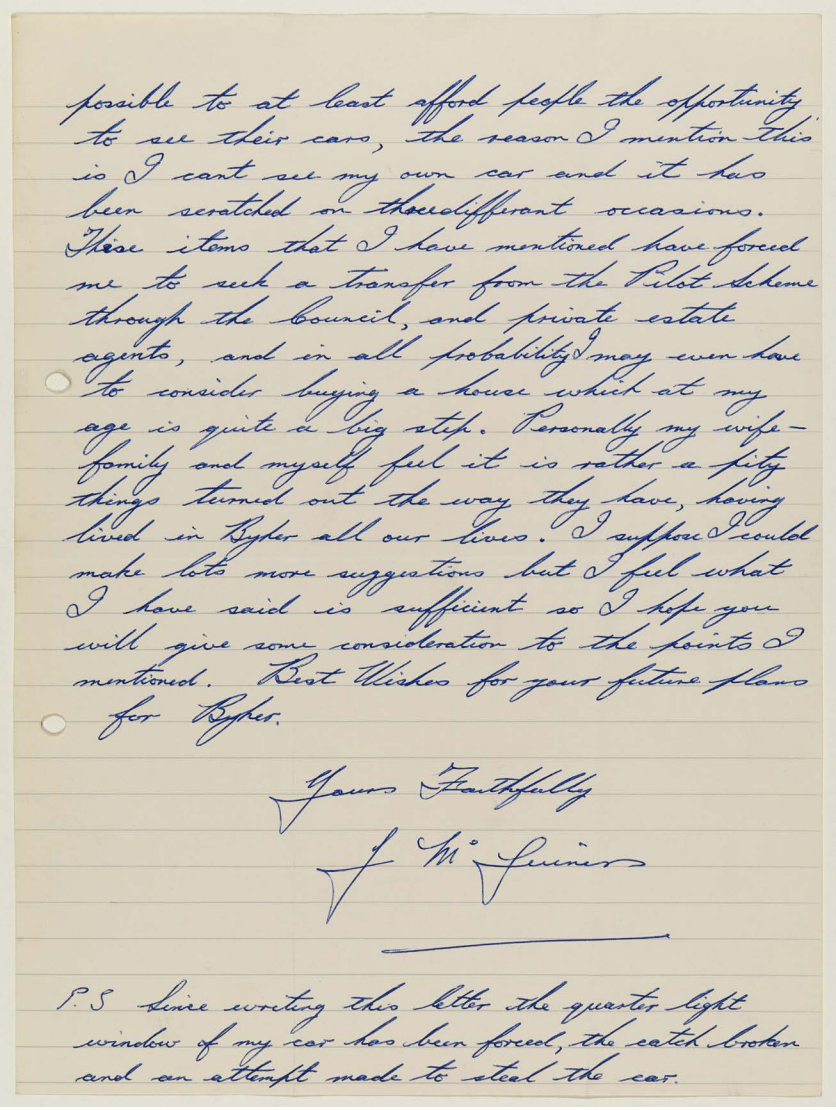
Dear Sir,

I sincerely hope you dont regard this letter as plain criticism but more as an attempt at constructive criticism. You are probably aware that I am refering to the Byker Pilot Scheme, I wish to make it quite clear that the houses you designed leave little, if anything to be desired, but may I suggest that in future planning, narrow spaces between houses - passage ways, and possibly squares be avoided. The reason I raise these points are because after living here for a period of 8 months I have found that the inside of the estate is virtually just a large Echo Chamber. There is very little peace and quiet, as even a person just talking quietly outside is quite audible in the house, may I also suggest that the landscaped areas be fenced off in future projects as I have had repeated experience of having to stop children from running through them. You may consider my next suggestion possibly even frivolous but if garages cannot be provided in future schemes could it be

FIGURE 5 page left-and right: Mr McGuiness' letter of complaint March 22nd 1972, 2 pages. Byker, RIBA Collections.

I sincerely hope you don't regard this letter as plain criticism but more as an attempt at constructive criticism. You are probably aware that I am referring to the Byker Pilot Scheme, I wish to make it quite clear that the houses you designed have little, if anything to be desired, but may I suggest that in future planning, narrow spaces between houses – passageways and possibly squares be avoided [...] after living here for a period of 8 months I have found that the inside of the estate is virtually just a large Echo Chamber. There is very little peace and quiet, as ever a person just talking quietly outside is quite audible in the house, may I also suggest that the landscaped areas be fenced off in future projects as I have had repeated experience of having to stop children from running through them [...] Personally my wife, family and myself feel it is rather a pity things turned out the way they have, having lived in Byker all our lives [...].

Yours Faithfully, J McGuiness[25]



possible to at least afford people the opportunity to see their cars, the reason I mention this is I cant see my own car and it has been scratched on three different occasions. These items that I have mentioned have forced me to seek a transfer from the Pilot Scheme through the Council, and private estate agents, and in all probability I may even have to consider buying a house which at my age is quite a big step. Personally my wife – family and myself feel it is rather a pity things turned out the way they have, having lived in Byker all our lives. I suppose I could make lots more suggestions but I feel what I have said is sufficient so I hope you will give some consideration to the points I mentioned. Best Wishes for your future plans for Byker.

Yours Faithfully

J McGuiness

P.S Since writing this letter the quarter light window of my car has been forced, the catch broken and an attempt made to steal the car.

25 McGuiness, J.. *Letter of complaint*, March 22nd, 1972. Byker, RIBA Collections.

Mr McGuinness' "constructive criticism" brings his personal experiences to bear on ideas for future design, but the feedback now goes well beyond the initial list of complaint requested by the architects. What had been the extra work of the architects collecting feedback, has now become the extra work (and skill) of the residents providing it.

In the letter the "Echo Chamber", as McGuiness calls the housing development, is described in terms of relations between spatial design and activities of use. In his critique of fences and passageways, McGuiness inscribes social processes, say desires and regrets for what could have been; sensory experiences of peace and quiet; and he describes residents' material practices such as having to stop children running through landscaped areas.

The letter, addressed to Mr. Erskine, conveys a command that, unlike the requested list, may not have been timed to coincide with specific design phases. Nevertheless, concerns raised in the letter, such as those related to noise and the proximity between private and public spaces, were taken into consideration by the architects in their ongoing design work. Erskine explained:

Byker is not radically different because of these conversations we've had from what it might have been anyway. But saying that I think it's important to understand that Byker is part of an on-going process [...] Therefore one does nonetheless get an accumulated experience of what people want and then it does get altered each time, no job at one time is like the job before entirely.[26]

We initially encountered the letter in the archive, then transcribed it, and now we share it with research communities by reading it aloud and discussing it here.[27] Picking up this archival document is an act that, in itself, can translate and contextualize concerns. In other words, we examine Mr. McGuinness's heartfelt evaluation of design and social agency, which remains relevant in ongoing heritage and transformation processes in postwar housing today. As *file*, the letter highlights specific and localized critiques of institutionalized practices, suggesting that these practices are adaptable and capable of accumulating experiences from below.

In her chapter "A Short History of Silence," architectural historian Janina Gosseye (2019) reminds us that those who use, occupy, and construct buildings possess unique spatial knowledge often absent from historiographic accounts. *On file*, the letter makes visible complaints and residents' socially reproductive processes (often kept *off the record*). It serves as a command to address these minor issues. This reminder from the past underscores the possibilities for a more inclusive future in mainstream practice. The letter captures complaints at a moment of suspension, as described by complaint scholar Sara Ahmed, "not yet done, not yet beaten."[28]

26 Ralph Erskine quoted in Bugler (1975). *This Island Now*: 15 (Authors' emphasis)

27 This paper was first developed by the authors for presentations at SAHGB Annual Symposium *ARCH/TECTURES ARCH/VES*, July 2020; and the symposium *The Practice of Architectural Research*, KU Leuven, October 2020.

28 Ahmed, S. (2021). *Complaint!*. Duke University Press: 276.

4 Conclusion: On File and As Files

These unconventional "participation" documents, catalogued under the "Pilot Scheme" and preserved within the extensive Byker archive, reveal how the architects initiated and facilitated information exchanges through residents' lists and letters of complaint. Residents' initial comments were further mediated through evaluative lists, memos, and investigative reports by experts and professionals. We find that paperwork was one of the means employed by the Byker architects to incorporate social agency into their mainstream design process. We also note, by tracing the forms of complaints used by one resident, that residents gained confidence in initiating and articulating their experiences. We have traced a cycle of effects, complaints, and the detailed design of creaking floor construction across files that document both these communicative processes and contractual information, design drawings, and specifications compiled according to familiar project phases.

On file, these materials allows us to catch fleeting glimpses of how the communicative processes with residents at Byker operated through paperwork and gain insights into the architects' practices. Thus, we observe how information is exchanged between different parties, across various documents, and over the extended timespan of the project, even when these elements are often seen as separate and incompatible. We know from social studies of Byker that the architects contributed to processes that engaged residents in the redevelopment, resulting in some degree of collective organization. According to those studies, residents' contributions were somewhat limited; "the citizen (adopted) the role of demander and complainant: informant rather than decision-maker."[29] However, we demonstrate here that the lists and letters of complaint, carefully elicited and retained by the architects, serve a more significant purpose than merely registering residents' dissatisfaction. These rare records must be seen as more than remnants of the lived social processes, as they also directed and conveyed residents' spatial knowledge into new building information. As files, they represent material means through which social concerns were formalized and integrated into the design process, and possibly into the physical objects as well.

As researchers, each approaching this work from our own unique perspectives, we draw two key conclusions. First, when considering archival research methodology more broadly, we find value in looking beyond the official documents that typically serve as the primary focus of archival research, such as drawings and, less frequently, specifications and other contractual documentation for the final building. Job files, which include letters, lists, and memos that record the everyday "bread and butter" work, to borrow Ricardo Agarez and Nelson Mota's term[30], are often considered marginal by architectural historians. In fact, they are rarely preserved at all. Nevertheless, our analysis demonstrates that these files not only record but also enable the reconstruction of architects' communicative processes. When the paperwork is innovative and seeks to incorporate residents' experiences, as is the case at Byker, it becomes an integral part of a specific architectural practice and its approach to design.

While communicative processes are a routine part of design and construction procedures and can often be traced by architectural researchers when job files have been retained in the archive, they are seldom the primary subject of study. These communicative processes, both on file and as files, enable us to challenge the conventional understanding of an architect's written work as a finite specification and representation. From the files, we learn that at Byker, both architects and other specialists, as well as

29 Zutshi, M. (1978). *Speaking for Myself: a Report on the Byker Redevelopment* (Newcastle Council for Voluntary Service). Byker, ArkDes Collection: 53.

30 Agarez, R. and Mota, N. (Eds.) (2015) The "Bread & Butter" of Architecture, *Footprint*, special issue no. 17.

residents, undertook additional work through lists and letters of complaint to document and transfer residents' knowledge into the design process. These 'extra' Byker files thus point to an underdeveloped area of historical research in architecture and also offer contemporary practitioners some insights and techniques on how these ubiquitous communicative processes can enhance and mobilize information from various actors and participants in architectural design processes. Studying the architects' site work through the archived papers, we illustrate that it blurs the boundaries between practical and social concerns as they accumulate over time. As files, the papers play a role in transfer processes, enabling different information to be picked up—or blocked—in design processes that are often more porous and heterogeneous than the final set of drawings might suggest.

As media historian Kate Eichhorn demonstrates, archival approaches can help us understand marginalized voices when we view the institutional archive not solely as "a place to recover the past but rather as a way to engage with some of the legacies, epistemes, and traumas pressing down on the present."[31] Archives can be critically mobilized to reveal marginalized perspectives for more just and inclusive purposes.[32] In considering our architectural history of Byker, among the many stories offered by the vast archive, we have explored the potential in media that enabled residents' voices to become embedded in the architectural design process. From a practice-based perspective, we argue that such a historical approach has the potential to address the issues architects face today in the reevaluation, maintenance, and transformation of the extensive postwar housing stock across Europe.

31 Eichhorn, Kate. 2013. *The Archival Turn in Feminism: Outrage in Order.* Temple University Press: 5

32 The historiographic approach aligns with e.g. Migotto, A. and Tattara, M. (Eds.) (2023). *Contested Legacies: Critical Perspectives on Postwar Modern Housing.* Leuven University Press; Azoulay; A. A. (2019). *Potential History: Unlearning Imperialism.* Verso. Mattsson, H. (2020), The Politics of the Archive: The Historiography of the Recent Past. In Pech, C. and Andersson, M. (Eds.). *ArkDes research symposium on architectural history: 2018.* ArkDes.

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On Dreaming Realities[1]

Cultural critique, design speculation and full-scale mock-ups

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Abstract

This essay delves into the installation designed by Hans Hollein for the *Künstlerhaus* facade in Vienna in 1985. It serves as an illustrative case of material speculation in architecture, particularly regarding the incorporation of 'historical' elements in contemporary architectural practice. Through a close reading of this installation, realized in the context of the exhibition '*Traum und Wirklichkeit, Wien 1870-1930*' (Dream and Reality, Vienna 1870-1930), I discuss how such speculation entails the physical replication of carefully chosen 'historical' forms and their reassembly in what would be best described as a 'fragmentary whole.' However, the reintegration of historical fragments into the present can manifest in diverse ways. I argue that in the installation that reshaped the facade of the *Künstlerhaus*, Hollein explored two contrasting modes while tracing the possibilities (and pitfalls) of their synthesis.

Keywords

mock-ups, fragments, assemblage, Medicine, Karl-Marx-Hof, billboards

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1 This essay builds on an earlier exploration of the topic published in the annual magazine Teatro Marittimo issue 10, July 2022.

To master irony in architecture is given to very few: Hans Hollein has done it for my generation.

Joseph Rykwert[1]

However, the exhibition does not only take place in the inside, it also radiates onto the cityscape, through metaphorical elements that illustrate "dream and REALITY"

Hans Hollein[2]

1 Prelude: An Exhibition within an Exhibition

On Wednesday, February 2, 2022, the new permanent exhibition at the *Architekturzentrum Wien*,[3] titled "Hot Questions – Cold Storage," opened its doors at the Museumsquartier.[4] The exhibition, curated by art historian Monika Platzer, presents a critical panorama of Vienna's architectural production, spanning from the turn of the last century to the present day. It takes as its starting point the tension between the apparent inertia of archival material, resting in a suburban Vienna depot, and the challenging issues that, when addressed, can make this archive speak. Thus, the curator presents "hot questions" to unearth the knowledge embedded in the "cold storage": Who shapes the city? Who provides for us? Who are we? These questions hang from the ceiling of the exhibition space, while below them, the paths explored by Viennese architects in different eras unfold.

One of these threads leads to another exhibition that took place almost four decades ago, significantly contributing to the redefinition of Vienna's identity as a central European metropolis: the exhibition *"Traum und Wirklichkeit. Wien 1870-1930"* (Dream and Reality. Vienna 1870 - 1930). It was curated by the Viennese architect Hans Hollein for the Vienna Museum and hosted at the *Künstlerhaus Wien* from March 28 to October 6, 1985. This was also the year when Hollein received the Pritzker Prize, and five years after the first architectural Venice Biennale, themed *"The Presence of the Past",* where he was one of the architects invited to collectively create the so-called *Strada Novissima*, a mock street that stretched across

1 Joseph Rykwert, "In Mönchengladbach, Hans Hollein's Museum - Domus," *Domus*, no. 632 (1982), https://tinyurl.com/kxaah77h.

2 Tino Erben, *Traum Und Wirklichkeit Wien, 1870-1930* [Wien] : Museen der Stadt Wien, 1985), 37.

3 *Architekturzentrum Wien* (AzW) is the Austrian museum of architecture, founded in 1993. As mentioned on its official website it is dedicated to exhibiting, discussing and researching 'the ways in which architecture and urban development influence and shape the daily life of each one of us'.

4 I had the opportunity to get a glimpse of the preparation of this exhibition during my secondment at AzW, in the framework of my PhD research within the network 'TACK – Communities of Tacit Knowledge Architecture and Its Ways of Knowing'. Discussions with Monika Platzer and her colleagues were immensely helpful in navigating Vienna's expansive architectural landscape, and the *Traum und Wirklichkeit* exhibition in particular. I am profoundly grateful to the AzW team for their support.

the Arsenale. Indeed, the *"Traum und Wirklichkeit"* exhibition curated by Hollein in Vienna should be seen in the context of what is often referred to as 'postmodernism' in architecture, with the role of exhibitions being decisive in its identification.[5] However, the aim of this essay is not to trace the coordinates of *"Traum und Wirklichkeit"* within the complex and heterogeneous developments of this period but rather to use a specific facet of this exhibition as an entry point to explore certain tropes of architectural research and experimentation.

2 Remaking: Critical value and heuristic potential

This paper considers the specifically architectural ways of investigating the critical value of past works and the potential for creative insight that is inherent in architectural reproductions. Throughout this exploration I align with a contemporary interest in the concrete modes through which architectural knowledge is constituted, in which exhibitions and installations, models and mock-ups play a crucial, if not always identifiable, part. The elusive agency of these media, however, reflects their ability to encapsulate meanings and experiences that resist straightforward categorization and conventional scientific methodologies, thus making them unique tools for grasping what has been described as Tacit Knowledge in Architecture.[6] Recent literature attests to a growing interest around the potential of 1:1 architectural reproductions to function as both analytical and intuitive tools,[7] and more broadly around the heuristic potential inherent in processes of re-enacting.[8] In this framework, *Traum und Wirklichkeit* can be approached as a 'laboratory exhibition' providing 'a testing ground in which architectural research is conducted (…) concerned with the investigation, development and experimentation of hitherto un-imagined, un-tested, un-established architectural propositions.'[9] More specifically, I focus on the installation that reconfigured the facade of the *Künstlerhaus*, and which was largely based on the reproduction of two carefully selected cultural artefacts, drawn from two seemingly distant eras of Viennese history.

5 Léa-Catherine Szacka, "Exhibiting the Postmodern : The 1980 Venice Architecture Biennale," ed. Adrian Forty, *The 1980 Venice Architecture Biennale.*, 2016; Mary McLeod, "Architecture and Politics in the Reagan Era: From Postmodernism to Deconstructivism," *Assemblage*, no. 8 (1989): 22–59.

6 Lara Schrijver, *The Tacit Dimension Architecture Knowledge and Scientific Research.*, 2021; Claudia Mareis, "The Epistemology of the Unspoken: On the Concept of Tacit Knowledge in Contemporary Design Research," *Design Issues* 28, no. 2 (April 2012): 61–71

7 Michael Eidenbenz, *Lloyd's 1:1. The Currency of the Architectural Mock-Up* (Zürich: Gta Verlag, 2021).

8 See for example Sven Lütticken, "An Area in Which to Reenact," in *In Life, Once More: Forms of Reenactment in Contemporary Art*, ed. Sven Lütticken (Rotterdam: Witte de With, Center for Contemporary Art, 2005); Angelika Schnell, "Performative Design Research: En-Acting Knowledge in Teaching," in *The Tacit Dimension. Architectural Knowledge and Scientific Research*, ed. Lara Schrijver (Leuven: Leuven University Press, 2021), 11–18; Vanessa Agnew, Jonathan Lamb, and Julianne Tomann, *The Routledge Handbook of Reenactment Studies: Key Terms in the Field* (New York: Taylor and Francis, 2019).

9 Florian Kossak, "Exhibiting Architecture: The Installation as Laboratory for Emerging Architecture," in *Curating Architcture and the City*, ed. Sarah. Chaplin and Alexandra Stara (Routledge, 2009), 117



FIGURE 1 The installation on the Künstlerhaus facade as featured in the exhibition catalogue. Source: Tino Erben, "Traum und Wirklichkeit Wien, 1870-1930."

2.1 Fragments, mock-ups, assemblages

The golden female figure on the left is Gustav Klimt's 'Medicine,' taken from one of the three famous paintings prepared to adorn the ceiling of the Great Hall of the University of Vienna (Philosophy, Medicine, Jurisprudence) between 1900 and 1907. These works stirred controversy among liberal humanists, conservatives, and anti-Semites, leading Klimt into a clash with a considerable portion of the academic and eventually the political establishment[10]. The architectural form reproduced on the right is equally notorious: it is one of the iconic towers designed by Karl Ehn for the 'Karl-Marx-Hof,' the flagship of Vienna's interwar public housing program. During the 1920s and '30s, the *Gemeindebauten* (municipal buildings) triggered reactions from both conservative critics (who viewed them as manifestations of communist aggression) and progressive modern architects (who saw in them backwardness and a historicist mood).[11] Thus, this architectural reproduction also harks back to another deep conflict from the city's history, with the Karl-Marx-Hof already at the center of ideological and aesthetic controversies before it came under literal fire from the Austrian army and right-wing militias in February 1934.

10 Carl E. Schorske, "Gustav Klimt: Painting and the Crisis of the Liberal Ego," in *Fin-de-Siècle Vienna. Politics and Culture* (New York: Vintage Books, 1981), 208–78.

11 Eve Blau, "Re-Visiting Red Vienna as an Urban Project," Austrian Embassy Washington, accessed September 24, 2021, https://tinyurl.com/5v66mwfd. These early modernist critiques can be paralleled with the later criticism of Manfredo Tafuri who read in the *Gemeinde-bauten* the political contradictions of Austrian Social Democracy. See Manfredo Tafuri, *Vienna Rossa : La Politica Residenziale Nella Vienna Socialista* (Milano: Electa, 1980).



FIGURE 2 Drawing by Hans Hollein for the *Traum und Wirklichkeit* installation. Credit: AzW

These two mock-ups, along with the facade of the 'historic' building on which they stand, and the billboard bearing the exhibition title, constitute the main elements of the installation designed by Hollein, which I would classify as an *assemblage*.[12] Assemblage theory, with its emphasis on the notion of a 'fragmentary whole,' enables me to identify the different roles that 'Medicine' and the Karl-Marx-Hof tower are called upon to play here, removed as they are from their historical contexts and reintroduced as fragments in the form of mock-ups.

2.2 A twofold approach

Thus, the interpretation I undertake in this essay primarily unfolds on two levels. The first concerns the critical value of this installation, focusing on the web of relations it establishes and the range of associations it offers, both in the past and present, through its afterlives in exhibitions such as the one hosted by AzW. To understand the mechanisms of reception that this installation explores and upon which it acts, it is necessary to outline the cultural context of its time, as well as the periods from which the two fragments are drawn. It is against these backgrounds that the contours of this installation's critical value are sketched.

12 Referring to a dynamic complex or arrangement of various components or entities, the concept of assemblage is invoked here to highlight the essential heterogeneity of this composition, as well as to emphasize the interplay between material and discursive dimensions, which is key to understand how this installation works and the kind of architectural speculation Hollein pursues through it. For a comprehensive overview of the concept of *assemblage* see: Thomas Nail, "What Is an Assemblage?," *SubStance* 46, no. 1 (October 24, 2017): 21–37; see also Donvey Kim, "Assembling Architecture," in *Deleuze and Architecture*, ed. Hélène Frichot (Edinburgh University Press, 2013), 131–48.

The second level focuses on the specifically architectural investigation carried out through the reshaping of this facade: the tools it adopts, the rules it sets or challenges, and the findings it presents. Hollein's prolific activity in the overlaps between art, performance, curation, architecture, and theoretical speculation allows me to read the intervention on the *Künstlerhaus* facade as a kind of research by design, particularly concerning the use of 'historical' fragments and their capacity to open up new directions for architectural practice.

At the same time, these two levels of interpretation seem to open the way for certain synthetic questions: How do the design choices of this assemblage appropriate or reinterpret the critical contents of the works reproduced? How do they relate to the artistic sensibilities or design rationales that gave rise to the past works? And in what directions do they steer them?

3 Traum und Wirklichkeit

3.1 A blockbuster's communicative strategy

Attracting more than half a million visitors, the *Traum und Wirklichkeit* exhibition played a pivotal role in establishing Vienna's reputation as a hub of modernism.[13] It illustrated the influential contributions of architects like Otto Wagner and Adolf Loos, artistic movements such as the Secession and *Wiener Werkstätte*, and the emergence of epistemic cosmogonies, including psychoanalysis. The exhibition spanned the period from 1870 to 1930, effectively bridging two eras that had, up to that point, seemed isolated in historiography. Furthermore, linking these epochs implied a contrast of a psychoanalytical or philosophical nature, seemingly attributing the notions of *"Dream"* and *"Reality"* to each of them.

A key aspect of Hollein's curatorial strategy, aimed at engaging diverse audiences, was the creation of a series of large-scale models and 1:1 mock-ups of prominent works from these periods. These objects were intended not only to convey information but also to evoke a mood (*Stimmung*) that captures the spirit of the era.[14] Hollein's reference to the concept of *Stimmung* hints at his understanding of the evocative power of tangible objects compared to, for example, texts or drawings. As a result, Loos's famous proposal for the Chicago Tribune competition (1922) reappeared alongside 1:1 reconstructions of the facade of the 'American Bar' (1908), and Otto Wagner's pioneering aluminum facade for the *Die Zeit* newspaper offices (1902). These works respond in various ways to the question of modern architecture's relationship to the past, especially in terms of its interpretation in facades, while simultaneously composing a genealogy in which Hollein himself appears to be situated on the edge.[15]

13 Hans Hollein, Catherine Cooke, *Vienna : Dream & Reality : A Celebration of the Hollein Installations for the Exhibition "Traum Und Wirklichkeit Wien 1870-1930" in the Künstlerhaus Vienna* (London: Academy editions, 1985).

14 Tino Erben, *Traum Und Wirklichkeit Wien, 1870-1930*, 37. In his 'Concept for the presentation of the Exhibition' Hollein clearly states that '[t]he exhibition is designed from the outset for a large, broad audience, a group of visitors with the most diverse educational backgrounds and interests'.

15 The interest in the column, the experimentation with scale and the formative experience of America are not only characteristic of Loos but also of Hollein, while the prominent role of aluminium in Wagner's *Die Zeit* facade evokes the one Hollein designed for the Retti Candle Shop in 1964. Such correspondences reveal the *Traum und Wirklichkeit* mockups also as indirect references of the curator to his own work and biography.

3.2 The Modus of 'Transformations'

In addition to the goal of engaging a broad audience, the reproduction of works at a 1:1 scale reflects a strong *design* commitment on the part of the architect-curator. This essay focuses on how this commitment was realized in the installation that led to a profound transformation of the exhibition building's facade. Built in the second half of the 19th century for the Austrian Artist's Association, the *Künstlerhaus* emulates the architectural style of an Italian Renaissance villa, featuring a main entrance flanked by two symmetrical recesses.[16] On top of these recesses, Hollein placed mock-ups symbolizing the two focal points of the exhibition. On one side, a plaster statue resurrects the female figure from Gustav Klimt's 'Medicine,' painted in gold, much like most of this section of the 'historic' building. On the other side, there is a three-dimensional rendition of the distinctive motif of the Karl-Marx-Hof towers, painted grey. Above the central wing, on the parapet, the exhibition title takes the form of a neon sign, reflecting the contrast between the two sides through a graphic portrayal of words. 'Dream' is written in gold lettering with a slanted gradient against a blue wavy background, linking it to the plain white capital letters of 'reality.'

Drawing from his extensive artistic involvement within what has been termed the 'Austrian Phenomenon,'[17] Hollein appears to build upon his experiments with the medium of collage. These experiments had already come to fruition between 1963 and 1968 with the 'Transformations' series of artworks, where a photograph of an everyday object is scaled up and collaged into a barren landscape. The visual vocabulary and design approaches explored in 'Transformations' are significant in interpreting the *Künstlerhaus* assemblage as an architectural experiment that further evolves collage into an installation, aided by the use of mock-ups.

4 The Traum Constellation

4.1 1890s and the bareness of reason

In adorning the University's Great Hall, the renowned ceiling paintings were intended to celebrate the modern disciplines of Philosophy, Medicine, and Jurisprudence. It seemed that no one could be more suitable for this task than the painter who excelled in decorating Ringstrasse monuments like the *Kunsthistorisches Museum* and the *Burgtheatre*. However, as Klimt's exploration of the 'true face of modern man' pushed him deeper into a critique of the institutions of humanism and further into the realm of instinct, his proposals for the University paintings evolved into one of Vienna's most heated debates at the turn of the century.[18]

16 Wladimir Aichelburg, *Das Wiener Künstlerhaus 1861 - 2001* (Wien: Österreichischer Kunst und Kulturverlag, 2003).

17 Gabriele Kaiser, Monika Platzer, and Martina Früwirth, *Architecture in Austria in the 20th and 21st Centuries* (Zurich: Park Books, 2016), 194–211.

18 Schorske, "Gustav Klimt: Painting and the Crisis of the Liberal Ego."

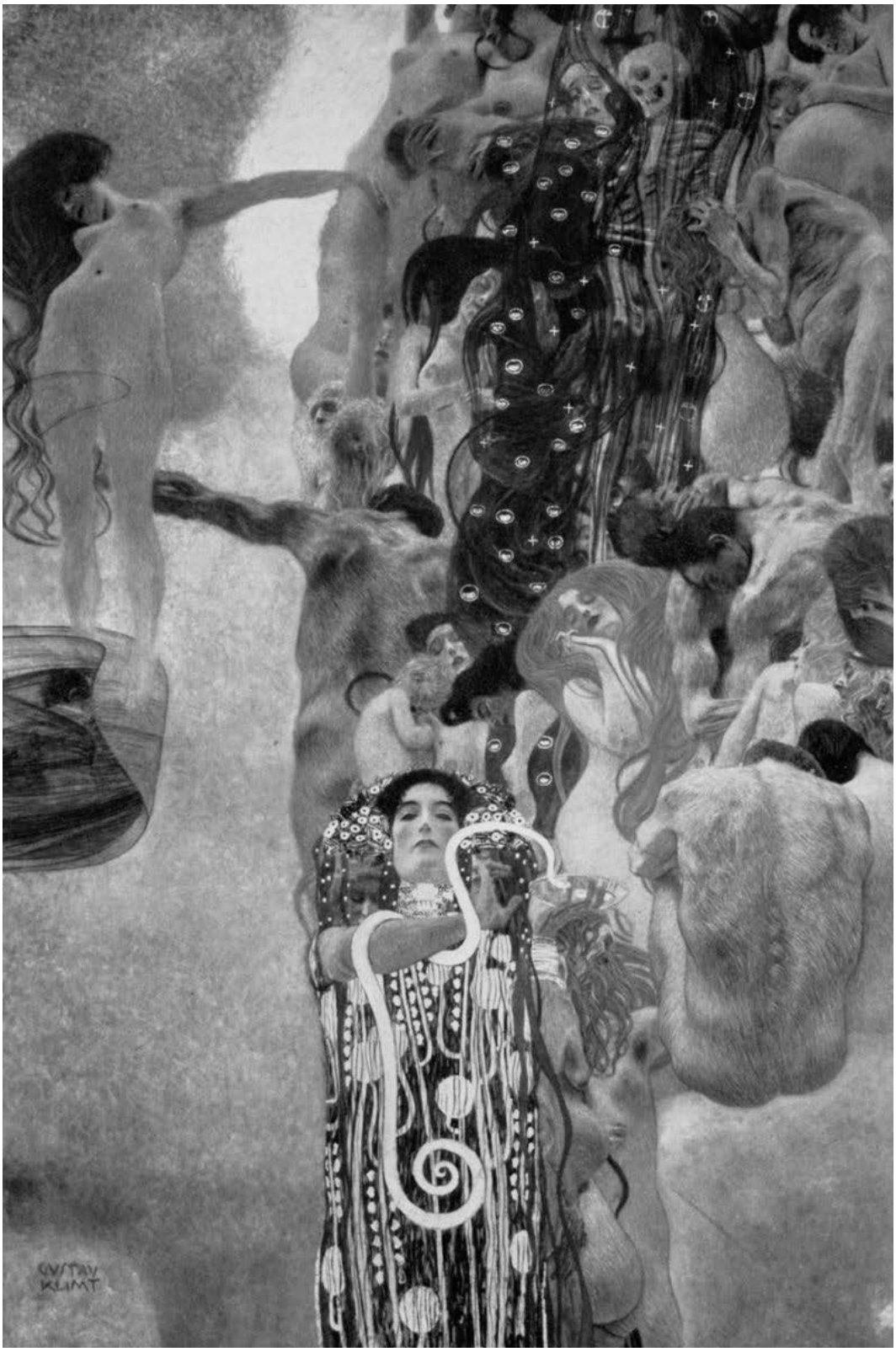


FIGURE 3 Gustav Klimt's *Medicine* (1901)

Presented in 1901 as part of the Secession's tenth exhibition, the painting portrayed an image of humanity as a tangle of bodies, suffering and voluptuous, at the center of which looms the specter of death. Amid this poignant mass, a hand reaches out in agony toward a naked woman, floating alongside the flow of bodies. Medicine also extends her reach, though in a different direction, with her eyes closed, content in a hedonic sphere of her own. At her feet, an infant plays, perhaps representing the future of mankind. In stark contrast to the figure of Medicine, at the base of the painting is the mythical figure of Hygeia, offering the viewer the cup of Lethe, from which the snake of Asclepius drinks.
Not surprisingly, the painting was met with resentment by members of the Department, who saw their discipline exposed as essentially detached from humanity. The drama of humanity played out alongside Medicine, with all its horror and grandeur. They must have clearly felt the painter's pervasive suspicion toward the powers of reason, a major theme of the fin-de-siècle intellectual atmosphere.

4.2 1980s and the reclaiming of figurativeness

Hollein's choice of this particular fragment evokes this conflict and, to some extent, re-enacts it. The very act of placing a nude figure of Gustav Klimt atop the headquarters of the (conservative) Austrian Artist's Association – from which Klimt departed in 1897 to establish the Secession – is a gesture rich with historical irony. The critical significance of this gesture becomes more pronounced when one considers the tumultuous journey of the Faculty paintings after they were rejected by the University. According to history, Medicine was initially acquired by a Jewish family, only to be later seized by Nazi Germany. It is widely believed that the painting was destroyed by a German SS unit, which, while on the run, set fire to the castle that housed the Faculty paintings. However, there is no concrete evidence to confirm this fate. The uncertainty surrounding the very existence of this artwork further strengthens its connection with the notion of 'dream.'
Moreover, the fact that Hollein chose the one painting owned by Jews and confiscated by the Nazis carries extra weight in Austria. In this context, Medicine seems to once again fulfill its provocative function, which derives not so much from its nakedness as from its posture and voluptuous pose. The comparison with the venerable male figures guarding the entrance to the *Künstlerhaus* heightens this sense of defiance, while her placement at the top of the building relegates the male figures to a minor and secondary role.
However, while these associations may evoke dissonant feelings, there are also aspects in which the introduction of this fragment harmonizes with the existing building. As the male figures themselves testify, the incorporation of statues into the structure of buildings or their protective presence atop structures is a familiar element of Vienna's urban landscape. It also alludes to the age-old connections between architecture and sculpture. Similarly, the use of gold in monument decoration, particularly in the case of the imperial city, appears to maintain an enduring significance.
In this particular instance, the symbolism of gold is also linked to its distinctive use by Klimt himself, in the abstract backgrounds of his paintings inspired by Byzantine art, which sometimes seemed to envelop the living figures.[19] These associations recall cultural memories of Vienna, which they simultaneously distort, rendering them both familiar and unsettling, thereby creating a sense of the uncanny.[20]

19 In this connection, Carl Schorske points to the *Portrait of Adel Bloch-Bauer* (1907) as the culmination of a series of paintings in which Klimt 'progressively extended the dominion of the environment over the person of the subject' (p. 269).

20 For the shifting meanings of the uncanny (*unheimlich*) and especially for its understandings in architectural thought see Anthony Vidler, *The Architectural Uncanny: Essays in the Modern Unhomely* (Cambridge, Mass.: MIT Press, 1999). Here I follow in particular Vidler's contention that 'architecture finds itself "repeating" history, whether in traditional or avant-garde guise, in a way that itself gives rise to an uncanny sense of *déjà vu* that parallels Freud's own description of the uncanny as linked to the "compulsion to repeat." The apparently irreconcilable demands for the absolute negation of the past and full "restoration" of the past here meet in their inevitable reliance on a language of architectural forms that seem, on the surface at least, to echo already used-up motifs *en abîme*. Deployed in this way, the uncanny might regain a political connotation as the very condition of contemporary haunting'. (p. 14-15)

Indeed, the proportions of the 'statue' in relation to the building and the unconventional pose of the female figure, seemingly spilling gold, appear to mimic and exaggerate the urban and architectural context.

4.3 Uncanny continuities

In this way, the examination of the left side of this assemblage reveals the function of a vertical axis that, while disrupting the neo-renaissance representation introduced by the *Künstlerhaus*, does not definitively sever ties with it. On the contrary, it seems to establish analogies with it and reframes it, turning it into a portal to the realm of the cultural subconscious. One can reasonably assume that, especially for Hollein's generation, the sight of a fully gold naked female body is more likely to evoke James Bond and Goldfinger (1964) than the traditions of Byzantine iconography or architectural decoration, without negating the significance of the latter. Indeed, the image of Shirley Eaton as the murdered Jill Masterson has been 'one of the most enduring scenes in cinematic history'[21] and pop culture, which Hollein placed at the center of his approach. Such an association also opens the way for the connections between sexuality and angst, fetishism, and dark humor that inform Hollein's work. From a different perspective, these images also invite a feminist reading of the particular way in which the female body is thematized, both by the Secession and Klimt, and by Hollein himself. Moreover, a feminist and decolonial framework may aid in a deeper critique of the assumptions that underlie the practice of detaching a form from its historical and cultural context.

4.4 Midas' touch?

What is particularly interesting here is the potential for a parallel (and possibly less deliberate) exposure of the processes of aestheticization that underlie the mining of history for its forms or motifs and the *extraction of value* from them. Similar to the cinematic James Bond, the golden female body alludes to the touch of Midas' hand. In this case, the myth may shed light on the violence inherent in the processes of abstraction that bring something under the realm of spectacle and exchange value, which are the mechanisms through which the commodification of history occurs.

This question of a necrosis of the historical form during its removal from its context is symptomatically revealed in Hollein's archive photographs of the mock-up being placed on top of the building with the assistance of a crane, with the camera capturing the agonizing moment of suspension, almost like a hanging scene. Adopting a decolonial (and anti-extractivist) perspective to examine how Western man mines his own history highlights the violence involved in the abduction of forms from their context, without regressing to idealizations of the 'original' or the search for the 'authentic.'[22] On the contrary, such a perspective raises the question of whether and how such an act can be justified.

21 Lee Pfeiffer and Dave Worrall, *The Essential Bond* (London: Boxtree Ltd, 1998), 36.

22 Ramón Grosfoguel, "Epistemic Extractivism. A Dialogue with Alberto Acosta, Leanne Betasamosake Simpson, and Silvia Rivera Cusicanqui," in *Knowledges Born in the Struggle*, ed. Boaventura de Sousa Santos and Maria Paula Meneses (New York: Routledge, 2019), 203–18; Naomi Klein, "Dancing the World into Being : A Conversation with Idle-No-More' s Leanne Simpson," *Yes! Magazine*, no. December 2012 (2013), https://tinyurl.com/yn228nvt.



FIGURE 4 Left: Shirley Eaton as the murdered Jill Masterson in Goldfinger (1964). Right: Transferring the mock-up to the Künstlerhaus. Credit: AzW



FIGURE 5 Placing '*Medicine*' on the Künstlerhaus. Credit: AzW

To address such questions, one must seek correspondences between the differing contexts, both in terms of cultural meanings and artistic practice. In terms of cultural critique, one may explore the issues raised by the new use of the fragment: does it engage with the cultural, ethical, and political tensions of the time in which it is (re)introduced? If so, does it aim to do so in a manner analogous to that of the work from which it is taken? Similarly, in the realm of architectural research and design experimentation, it seems necessary to search for correspondences between the new composition and the artistic insights that gave rise to the work from which a fragment is derived.

5 The Wirklichkeit Constellation

Through such a prism that explores the critical nuances between the re- and the de-contextualizing of 'historical' forms, the mock-up of the Karl-Marx-Hof on the right side of the *Künstlerhaus* can also be interpreted. Completed in 1930, the Karl-Marx-Hof is located in the Heiligenstadt neighborhood of Vienna's 19th district. Designed to house approximately 5,000 residents, this housing complex stretches over a length of more than one kilometer and is arranged through five inner courtyards (*höfe*), accommodating communal facilities.

5.1 "Scintillating Traditionalism" in the 1930s

As convincingly argued by historian Eve Blau, the heterodox modernism of the architecture of Red Vienna expressed a strong intention to modernize urban life for the benefit of the working classes, alongside a sensitivity to the legacies of the existing 'historic' city. The decision to integrate the new complexes into the old urban fabric (also dictated by practical constraints and pragmatic concerns), the adherence to the existing urban layout, and the adoption of the 'indigenous' type of the *Hof-Haus*, the perimeter block with an inner courtyard, all reveal the intention of an interweaving of the new with the old, or a strategy of *transforming* the old into the new. In the words of Anson Rabinbach:

> By retaining the old city plan, the socialists honored the older, bourgeois topography. At the same time they transformed the bourgeois notion of private interiors by adding such public facilities as playgrounds and laundries. (…) The socialist's predilection for courtyards and monumental facades highlights not only their belief in the social function of architecture but also their sensitivity to the cultural memory of Habsburg architecture in the Baroque era.[23]

In interpreting the historical sensitivity of the architects of Red Vienna, Eve Blau has pointed out that many of them were students of Otto Wagner, whose teaching and practice constantly revolved around the question of balancing the tensions between the old and the new.[24] Furthermore, Blau suggests that in the case of Red Vienna, the cosmopolitan monumentality of the *Wagnerschule* fused with Vienna's other major school of urban thought, namely that of Camillo Site – strongly rooted in the artisan tradition and the 'historic' townscape[25] – leading to what Friedrich Achleitner described as 'a scintillating traditionalism.'[26]

23 Anson Rabinbach, "Red Vienna: A Worker's Paradise," Virtual Vienna, accessed September 27, 2021, https://tinyurl.com/44xb2hz6.

24 Eve Blau, *The Architecture of Red Vienna, 1919-1934* (Cambridge Mass.: MIT Press, 2018), 8–9. According to Blau it is significant that many of the architects of Red Vienna worked in Wagner's office while he was in charge of the realization of the city's modern railway network, the *Wiener Stadtbahn*. From Blau's perspective, the Stadtbahn is to be seen precisely as an endeavor to transform Vienna into a modern metropolis, while respecting its historical character. See: Blau, "Re-Visiting Red Vienna as an Urban Project."

25 For the tension between these two schools of urban thought, but also their mutual emphasis on monumentality, see Carl E. Schorske, "The Ringstrasse, Its Critics, and the Birth of Urban Modernism," in Fin-de-Siècle Vienna. Politics and Culture (New York: Vintage Books, 1981), 24–115.

26 Friedrich Achleitner, "Comments on Viennese Architectural History: Motifs and Motivations, Background and Influences, Therapeutic Nihilism," in *A New Wave of Austrian Architecture*, ed. Kenneth Frampton (New York: Institute for Architecture and Urban Studies, 1980), 11. Cited in Eve Blau, *The Architecture of Red Vienna, 1919-1934* (Cambridge Mass.: MIT Press, 2018), 9.

Importantly, this approach did not confine itself to the level of typological transformations but was strongly expressed in the decorative program, the ornament, and iconology of Red Vienna buildings: in mosaics and ceramic tiles, paintings, and, not least, in statues. These figures often recall the martyrs and saints that adorn Western cathedrals while gesturing towards the foundational narratives of socialist ideology. A similar function is served by the inscriptions commemorating the large property tax that financed the housing program, as well as the identification of the new *Höfe* with the names of heroes of socialist history.



FIGURE 6 Left: Placing the Karl-Marx-Hof mock-up on the Künstlerhaus Credit: AzW. Right: Sculptural ornament on the Karl-Marx-Hof. Photos by the author.

These elements, involving narrative and figurativeness, seem to have, on the whole, not received due attention, possibly because even today our perspective is still governed by modernism's fundamental favor toward abstract form. However, it is precisely these elements that are essential for grasping how the architecture of the *Gemeindebauten* sought to link the everyday experience of new urban life, as expressed at the level of the functional program (clinics, libraries, nurseries, etc.), with the political thought and ideals behind it, expressed at the level of the iconographic program. What becomes manifest behind this approach is a specific understanding of the cultural role of architecture and its ability to link the ordinary and the extraordinary, the real and the ideal, or indeed, 'dream and reality.' But if the architects of Red Vienna were to follow such a conception of architecture, they had to work as much with the undeclared dispositions of spatial arrangements as with the cultural narratives articulated more explicitly in ornament and iconography.

5.2 Iconoclasm from the 1960s

Interestingly, these narrative elements are downplayed by the mockup that Hollein constructs. Indeed, it is not only the statues of Karl-Marx-Hof that are absent, but any element (ornament, symbol, or text)

that would figuratively convey the emancipatory promise of Red Vienna.[27] To be sure, this choice can be understood in the context of the overall scheme, where the sensual female figure on the left is to be contrasted with the abstract building form on the right: it is the pursuit of a sharp and clear opposition that dictates the stripping of the Karl-Marx-Hof of its ornament. The distance that separates such a pursuit from the design thinking of the Red Vienna architects becomes more apparent if one examines the 1930s pamphlet that was intended to introduce the Karl-Marx-Hof to the general public (fig. 7). There, on the top left of the cover, one finds a graphic representation of the building where, despite the high degree of abstraction, the form of the statue is *not* eliminated. On the contrary, the statue is introduced as a key element of the composition, occupying its central axis, and more specifically, the place of the arch *keystone*, thus following a long building tradition in which structural functions are densely interwoven with the discursive and narrative dimensions of edifices.



FIGURE 7 Red Vienna Pamphlet: "The Karl Marx-Hof: the housing complex of the municipality of Vienna on the Hagenwiese in Heiligenstadt." Credit: Vienna Library in City Hall.

But here, Hollein appears to be exploring an approach that purposefully steers clear of figurative representation and, perhaps more profoundly, an architectural attitude that, instead of seeking correspondences and uncanny continuities, focuses on discontinuity and rupture. In this direction, one can observe the vertical discontinuity between the Karl-Marx-Hof mock-up and the *Künstlerhaus*, which is reinforced by their chromatic divergence. If on the left side, a complex and contradictory relationship between the existing building and the mock-up was still tending towards a 'difficult whole' (to borrow Venturi's terms), the right-hand axis appears to question the very possibility of such a whole. The Karl-Marx-Hof is landing on the roof of the *Künstlerhaus*—or rather hovering over it—in a way that resembles an assault from the future, highlighting Hollein's affinities with aspects of the so-called '60s and '70s avant-garde, such as Archigram and the Italian Radicals.[28]

27 An exception is the element of the flag (often favored within the postmodernist framework), which is not only preserved but also multiplied, emphasizing the monumental character of the work. Overall, one might observe that Hollein's mock-up reflects more the 'exterior' side of the Karl-Marx-Hof – the rather unadorned East facade – and less that of the inner courtyard, in which the four statues are placed.

28 For a critical reading of the experiments of this period and its attitudes towards the 'historical' city and 'traditional' architectural form see Pier Vittorio Aureli, "The Difficult Whole," *Log*, no. 9 (2007): 39–61.

More specifically, this design approach recalls the modus operandi followed by Hollein in his "*Transformations*" series, where 'an agricultural or urban landscape, often barren, is the site for a monumental industrial object.'[29] Among these works, the famous 'Monument to Victims of the Holocaust,' where a train carriage is scaled-up, placed on a monumental pedestal, and thus transformed into an enigmatic and ominous architectural space, exemplifies the mechanism employed with the fragment from Karl-Marx-Hof. Furthermore, the architectural and urban ideas underlying the (dis)association of the mock-up with the *Künstlerhaus* are illuminated by 'Aircraft Carrier City in Landscape.' In this work, the towering image of an aircraft carrier (specifically the USS Enterprise[30]) appears unexpectedly on a rural landscape, apparently suspended in a bucolic past: 'an iconoclastic relic of its former function; its use here confounds common understandings of what it means to build in the contemporary landscape.'[31]

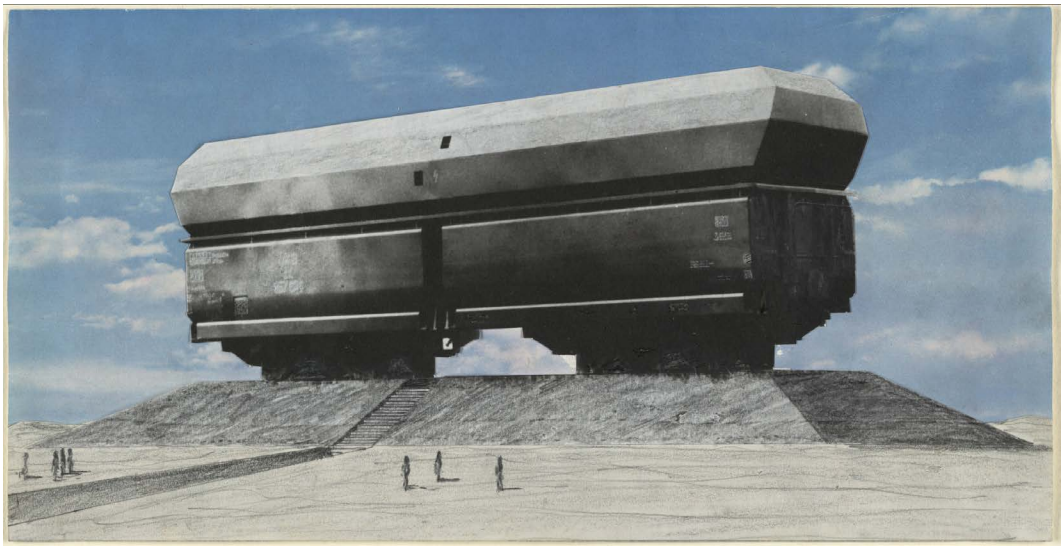


FIGURE 8 Monument to the Victims of Holocaust'. Source: Collection of The Museum of Modern Art, New York. Philip Johnson Fund, 1967

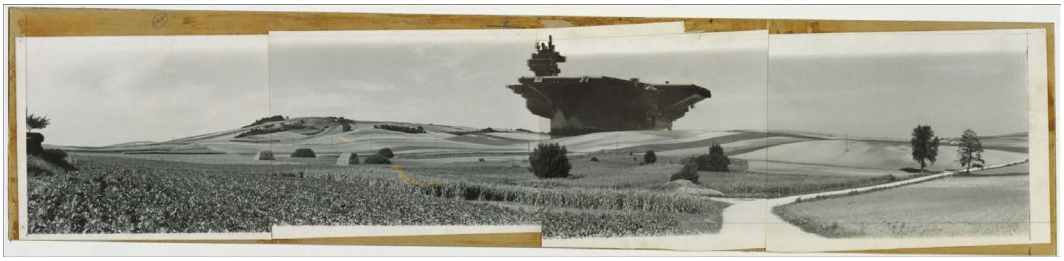


FIGURE 9 'Aircraft Carrier City in Landscape'. Source: Collection of The Museum of Modern Art, New York. Philip Johnson Fund, 1967

29 "Hans Hollein. Aircraft Carrier City in Landscape, Project, Exterior Perspective. 1964 | MoMA," accessed February 28, 2022, https://www.moma.org/collection/works/634.

30 Branscome, "Ship to Shore."

31 However, as Eva Branscome has shown, Hollein's resourceful irony requires such alienating associations to be also read in reverse: in the case of the 'aircraft carrier' the impression of a threatening warship in a peaceful landscape is subverted when we learn that the aircraft carrier has in fact been collaged on a vast minefield, on the border with Soviet Hungary – and thus it turns out to be trapped and utterly vulnerable. So too in the case of the right side of the *Traum und Wirklichkeit* installation, the cut-off tower of Karl-Marx-Hof may be seen as an allegory for Red Vienna itself: an isolated revolutionary enclave in an otherwise conservative country.



FIGURE 10 Working model for the *Traum und Wirklichkeit* installation, included in the catalogue of the exhibition. Credit: AzW

5.4 Curating rupture?

At first sight, the design approach followed on the right side of the installation does not seem to differ significantly from what one sees on the left: The critical fragment is once again drawn from a contested public sphere and a turbulent time in the city's past. Again, the image selected by the architect stands as a potent icon that has traveled across multiple media and has been instilled in different ways in collective memory, becoming, so to speak, part of a mythology. Also, in both cases, the fragment has been scaled and transformed into a free-standing sculptural object. And yet, what the mock-up reveals, and which is not conveyed as powerfully by Hollein's sketch (in which the right side is more tenuously drawn than the left), is that something different is at work here. I would argue that the key difference, in terms of design attitude, lies in the claimed autonomy of the fragment and the ways in which it does not converse with its new context. Specifically, if on the left side of the installation, the fragment of Klimt's painting tends to integrate into its new context by bending its ornamental order, the mock-up of the Karl-Marx-Hof on the right seems to strive for autonomy through a process of neutralizing its new context.

Certainly, there are key differences between the two fragments, endowing them with essentially different transformative potentials. As a human figure, Medicine readily lends herself to being transformed into a statue and thus engaging with the existing ornament. An analogous approach on the Wirklichkeit axis would perhaps treat the Karl-Marx-Hof fragment as a *turret*, mimicking the castellated edifices found in many parts of Vienna and which were widespread in the late 18th and early 19th centuries.[32] In fact, such an approach is conveyed by a working model of the installation in which the right side of the *Künstlerhaus* is not represented in grey but *in red*, implying a continuity between the 19th-century building and the 1930s fragment (fig. 10).

On the contrary, the choice of chromatic divergence enhances the singularity of the fragment, while the selection of grey tends to render the existing building into a neutral background, suitable to bring out what is showcased, as an *exhibit*. This assumption is further confirmed by the treatment of the (non-)lighting of the right side of the *Künstlerhaus*, in the establishing shot of the installation in the exhibition's catalogue (fig. 1), where the right wing of the 'historic' building is literally switched off, in order to elevate the carefully illuminated fragment. The contours of the architectural stance explored here thus begin to take shape: To emerge as a self-sufficient presence, the work of (absolute) architecture must distance itself from its context; its aesthetic purity depends on its detachment from what surrounds it.[33]

6 A Spectacular Bridging

If from the very start it was obvious that this assemblage is governed by a horizontal tension between Dream and Reality, an examination of its two vertical axes allowed me to delve into the particular design choices through which these concepts are interpreted by Hollein, and to derive from them two different architectural attitudes. It now seems appropriate to consider this assemblage as a whole and, more importantly, the way in which the architect comes to bridge the gap that he so diligently opened.

On a practical level, the luminous sign in the middle draws the name of the show in the night sky, heralding the event in the public space of the city, and especially to the fast-passing cars. Capturing the gaze of the rushing urbanites is supported by its size, materiality, and graphic expression, alluding to the tropes of advertising. The title itself is thus introduced as an advertising quote, succinct and persuasive. At the level of significations, it is clear that 'grey reality' merges with 'golden dream' thanks to the power of spectacle. Partly ironic and partly literal, this bridge is posited as both a critical comment and a positive architectural proposition: the idiom of mass culture is understood as the route (or maybe the highway) through which any attempt to connect the real and the oneiric must pass, in this post-industrial age; and perhaps more widely, as the one all-encompassing language of the contemporary world. Inseparable from this language is the habitus of consumption. Hollein's assemblage seems to declare an awareness of this condition, while leaving open the question of whether this leads to a quest of its undermining, or whether instead to an embrace of the phantasmagoria of commodity.

32 *A Dictionary of Architecture and Landscape Architecture*, January 1, 2006. Available at https://tinyurl.com/48wrnvcx

33 This understanding of Hollein's concept of "Absolute Architecture" mainly follows Karsten Harries, "The Terror of Time and the Love of Geometry," in *The Ethical Function of Architecture* (Cambridge Mass.: MIT Press, 2000), 230–31. See also Karsten Harries, "The Dream of Complete Building," *Perspecta* 17 (1980): 36–43.

7 Conclusion: On dreaming realities

If these observations are anywhere near the mark, one could argue that while both strands of the installation seem to follow similar logics, in fact, they move in different directions: the 'Dream' side seeking uncanny continuities and the 'Reality' side tracing ways of curating rupture. In this way, the two sides of the installation frame the concepts of Dream and Reality in a particular – and debatable – manner, as well as the two eras of Vienna they present. Most importantly, the installation at the *Künstlerhaus* can be read as an experiment in which emerging architectural values are tested. The constellation of *Traum* encompasses body and sensuality, color and decoration, continuity, metamorphosis, and figurativeness. The constellation of *Wirklichkeit* is associated with spirit and reason, structure and function, discontinuity and abstract form. The bridge that links the two as Traum *und* Wirklichkeit wears the neon light, consciously inviting the architect to learn from the advertiser and the product designer.

The architectural hypotheses Hollein explores are mainly concerned with (and revealed through) the relations between fragments and their new contexts. The interpretation I have put forward in this paper would see the architect, under his constellation of *Traum*, probing the attitude of critical re-contextualization that beckons beyond the fragment and the work itself, towards the broader urban and cultural context. On the other hand, under the constellation of *Wirklichkeit*, the architect appeared to explore the modalities of de-contextualization, driven by the search for a self-sufficient aesthetic presence.[34] Finally, in the neon sign, I saw the question of context taking on its most critical face: on the one hand, the phantasmagoria of the spectacle is posed as the dominant condition in which, willingly or not, the architectural work is called to find its place. On the other hand, the weight of the cultural references that constitute the anchors of the installation seems to undermine such a capitulation, recognizing mass culture as the condition through which architectural research must pass – and architectural practice should overcome.

The role of replicas and mock-ups in this exploration seems to be pivotal, not only because they provide powerful tools for testing and evaluation, but also because they encapsulate many of the tensions explored in this essay. On the one hand, when substituting for architecture, mock-ups may function as instruments of escapism to a 'Disneyland' past that remains unknown and unknowable. On the other hand, insofar as they are involved in a critical process of architectural (re)creation, they seem to point to 'early modern practices (…) when "copying was the normal way to make new things," and when the meaning of an artifact was found and preserved "across a chain of mutually substitutable artifacts," rather than by the authority of historical origins and first versions.'[35] This function of mock-ups also points toward their power to assist the architect in a more radical questioning of the axioms bequeathed to her by modernity, among which the dichotomy of dream and reality is not the least critical.

34 It would be possible to trace these tendencies in the architectural developments of the 1990s, especially if we consider that three years later came the exhibition on 'Deconstructivist Architecture' at the Museum of Modern Art in New York. The work of Eisenman, Hadid, Tschumi, Coop Himmelblau and Koolhaas, seems to be considerably concerned with the tensions that Hollein explored with the installation at the Künstlerhaus.

35 Mari Lending, "Monuments in Flux. Introduction," in *Monuments in Flux*, 68.

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Design of Co-creation in Rotterdam Central Station (1996-2007)

Architecture and urban design roles in the multi-stakeholder collaboration

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Abstract

This article explores the pivotal role of design as a decision-making tool within multi-stakeholder collaborations, focusing on the early phases of the Rotterdam Central Railway Station and its surroundings project. Spanning from 1996, when it gained National Key Project status, to 2007, when construction commenced, this period precedes the preliminary design, during which the design process becomes the primary method of collaboration among multiple stakeholders, including designers and clients involved in the station area's development.

After introducing the post-war reconstruction of the station area and the 'Platform Zero' experiment, this article defines three key stages of design in the initial phase, each of which left a distinct mark on the station project. These stages are:

- From 1996 to 2001: Design for political communication.
- From 2002 to 2004: Parallel design.
- From 2004 to 2007: Design co-creation and integration.

To provide a comprehensive view of the design's development, this article includes insights from conversations with architects and planners engaged in the process. In a dynamic exchange between various stakeholders and designers, the evolution of Rotterdam Central Station's design reveals how political decisions have been informed by thorough design studies, offering a platform for robust discourse on critical issues.

Keywords

mobility, stations as nodes, urban design, architectural research, multi-stakeholders' collaboration, building blocks, co-creation, integrated design

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1 Introduction

As in many European cases at the beginning of the 1990s, the city of Rotterdam leveraged the development of the high-speed railway infrastructure (HSR) to enhance its image and urban economy through ambitious plans for the central station area. In 1996, Rotterdam Central Station became one of the six national National Key Projects, encompassing the station buildings and the development of their surrounding areas, directly and indirectly contributing to the construction of the high-speed railway connecting the Netherlands with France and Belgium. The other projects included Amsterdam Zuidas, The Hague New Central, Utrecht Central, Arnhem Central, and Breda Station District. The vision was that improving the public transport network would support Rotterdam's aspiration to reinforce its position on the map of Europe and to serve as a new gateway to Schiphol Airport (Tellinga, 1996).

The construction or renovation of the station and its surroundings constituted a complex urban development task, involving a multitude of expertise, parties, and interests. Government entities, provinces, regions, and municipalities collaborated with designers for several years on these National Key Projects. These initiatives were characterized by long-term planning and a high degree of complexity, requiring designers to engage with multiple stakeholders during various consultation phases. The resulting stations symbolize not only a challenging construction endeavor and the necessary expansion of the station but also a significant enhancement in public transport quality and the development of station areas (Spoorbeeld, 2016).

This article delves into the project definition phase of Rotterdam Central Station, aiming to investigate the role of design as a decision-making tool in multi-stakeholder collaborations. It introduces three distinct phases and definitions of design within the stage that precedes the preliminary design of the station building and its surroundings, spanning from 1996 to 2007. The author has had the opportunity to interview key stakeholders involved in the design of Rotterdam Central Station and has accessed archives from the municipality, railway companies, and design offices during doctoral studies. The article's focus lies in analyzing and extracting insights from this specific phase of the project.

Rotterdam Central Station before 1996

The context of the Rotterdam Central Station area cannot be separated from its rich historical background. Much like the city center, the origins of this area date back to the 19th century. Its development was closely tied to the industrialization of the railways. In 1847, the railway connecting Amsterdam to Rotterdam was inaugurated, marking a significant milestone. Later, in 1877, a railway viaduct was constructed, spanning the city and crossing the River Maas.

However, the area underwent substantial changes after the devastation caused by the Second World War, leading to the disappearance of Hofplein, which was the city's main social hub, along with the closure of Delftse Poort station. The year 1953 saw the emergence of the Groothandelsgebouw (Wholesale Building) at the central station area, which stood as the first major urban development project in the city center's revitalization. Simultaneously, the opening of the Weena tunnel and the Hofplein fountain became powerful symbols of post-war rejuvenation.

Further transformations occurred in 1957 when the new Central Station, designed by the architect Van Ravesteyn, was constructed, along with the EKP building on Delftsestraat. However, by the 1960s, the station square was primarily dominated by cars and parking spaces. The immediate surroundings featured a bus station in front of the post office, and the street facing the station, Weena Boulevard, was characterized by an empty square adorned with pavilions (Figure 01).



FIGURE 1 Rotterdam Central Station area, view on Weena in 1970. Source: Stadsarchief Rotterdam (Rotterdam City Archive) NL-RtSA_4282_1970-514 (digital image)

Platform Zero

The construction of the underground metro line, leading from Central Station beneath Weena to Coolsingel, was completed in 1968. Simultaneously, a railway line connecting the station to the national airport was also established. This new railway connection rendered the previous bus link between the station and Schiphol Airport unnecessary. Consequently, other bus lines shifted their stops from Central Station to Zuidplein, where the first metro station was also constructed.

The rapid decrease in the number of buses led to the closure of the bus station on the east side of the station during the 1980s. This vacant space soon attracted drug users, homeless individuals, and alcoholics, transforming the station square into an unsafe place. The situation was vividly described by Pastor Visser of the Church St. Paul in his book, "*Platform Zero, Rise, and Fall*" (in Dutch, "*Perron Nul, Opkomst en Ondergang*"). In response to these challenges, Pastor Visser established a shelter at the location of the former bus station, called 'Platform Zero,' providing a space for people to gather and receive support. The shelter officially opened on March 31, 1987, offering an alternative to the station itself. Unfortunately, the shelter attracted a large number of addicts, including individuals from abroad. Disturbances and incidents were a common occurrence at Platform Zero, and in 1992, the project had to relocate to the west side of the station due to a significant altercation between hundreds of marines and the addicts on the station square (Figure 02).

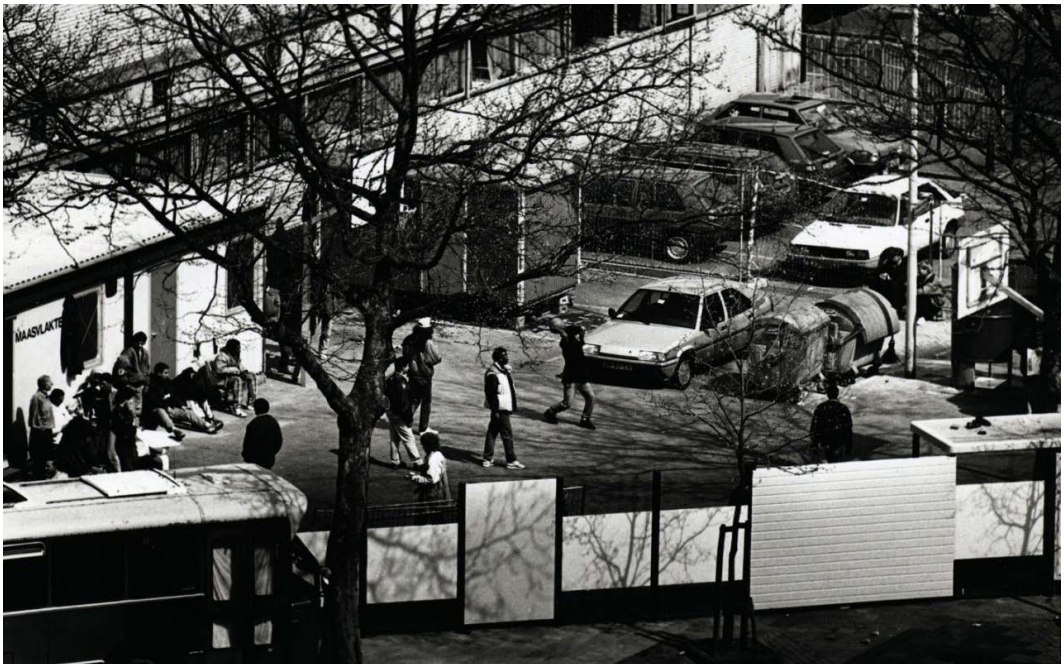


FIGURE 2 Platform Zero in 1992. Source: https://www.mariniersmuseum.nl/nl/de-slag-om-perron-nul/

In 1994, 'Platform Zero' was closed by the mayor of Rotterdam, Bram Peper, and Pastor Visser continued his support at the Church of St. Paul. Following this closure, the Central Station area remained car-dominated, unfriendly, and unsafe. During this period, the city had different priorities on its agenda, and the social challenges stemming from the Platform Zero experiment, such as the issues with drug users, homeless individuals, and alcoholics, were not the primary focus. The city was focusing on developing its harbor and becoming the first city in the Netherlands with its own metro.

In 1991, the Rotterdam City Council organized a trip to Lille to visit the newly built HSR station Lille Europe and the station area development project known as Euralille, designed by the Dutch architect Rem Koolhaas. The aim of this visit was to draw inspiration from this large-scale masterplan, which featured high-rise buildings alongside infrastructural development (Figure 03). In 1993, with the construction of the tunnel over the River Maas, replacing the railway viaduct, the city's vision for a renewed central station was combined with plans for high-rise developments that could run perpendicular to the railway tracks. This served as a precursor to a masterplan by the National Railways (NS). It's highly likely that Euralille served as a reference point for both the redevelopment of Kop van Zuid (the former harbor area), a part of the 1st generation of Key Projects, and the new ambitions for Rotterdam Central Station, which belonged to the 2nd generation of Key Projects, known as Nieuwe Sleutelprojecten (NSP) in Dutch. The NSP can be likened to the French *Grand Projets*, adapted to the Dutch context (Triggianese, 2015).



METROPOOL Het Vrije Volk Z2

ZATERDAG 2 FEBRUARI 1991
PAGINA 15

Van Brienenoord nummer één in file top 20

ROTTERDAM — De oprit van de Van Brienenoordbrug richting Rotterdam is nummer één geworden in de file top 20 van Rijkswaterstaat over 1990. In totaal stonden er 326 files met een totale lengte (over alle rijbanen) van 1444,3 kilometer. Vorig jaar liep de stroom auto's 237 keer vast.
De Rotterdamse Verkeerspolitie heeft geen directe verklaring voor de sterke groei van het aantal verkeersopstoppingen bij de Van Brienenoordbrug. „Aan die kant van de brug is niets veranderd," zegt brigadier Hans van Vliet van de motorbrigade. „Het is dus drukker geworden maar waardoor dat komt weet ik niet. Het lijkt me onwaarschijnlijk dat er meer mensen in de auto zijn gekropen. Op de terugweg staan er namelijk minder files."
Het beruchte stuk snelweg haalde in '89 de vijfde plaats. Nummer drie werd toen de oprit in tegenovergestelde richting. Na de openstelling van het nieuwe stuk Van Brienenoordbrug richting Dordrecht is daar het aantal files sterk afgenomen: van 291 in '89 naar 125 vorig jaar. Dit was in de jongste top 20 goed voor een tiende plaats. Volgens persvoorlichter Hans Schalten van het ministerie van Verkeer en Waterstaat is het 'winnen' van de top 20 door de Van Brienenoordburg niet alleen te wijten aan een grotere stroom auto's. „Het heeft ook te maken met het gereed komen van de ring rond Amsterdam in september. Het aantal files bij belangrijke Amsterdamse knelpunten is daardoor afgenomen waardoor deze in de top 20 plaatsen zijn geraakt," zegt hij.
In 1989 was de Coentunnel de onbetwiste 'winnaar' van de top 20. De files aan beide kanten van de tunnel bleken goed voor een eerste en tweede plaats, al lagen de aantallen een stuk lager dan die bij de Van Brienenoordbrug over 1990. „Sinds het rondkomen van de ring rond Amsterdam, zijn de files daar sterk afgenomen. Dat is in de cijfers over de laatste maanden van vorig jaar duidelijk te zien," zegt Scholten. Opvallend is dat de Beneluxtunnel in de top 20 een steeds 'steviger positie' inneemt. De tunnelbuis richting Schiedam staat met 228 files over 1990 op een zesde plaats (was elf met 108 files). De buis richting Hoogvliet staat als nieuwkomer op een zeventiende plaats met 95 files.
De beide opritten van de brug over de Noord bij Alblasserdam zijn uit de top 20 verdwenen. In '89 stonden daar 88 en 69 files. Over 1990 is de Utrechtse Baan in Den Haag hekkesluiter.

FOTO'S MELS VAN DER HOEVEN, GRAFIEK: BEN ELLENBROEK, TEKST: REM DE GROOT

Rem Koolhaas moet Lille vleugels geven

Architect uit Rotterdam heeft stedebouwkundige supervisie over flitstreinstation en hele omgeving

Door Herman Moscoviter

Rem Koolhaas, architect te Rotterdam, werkend in Nederland, Duitsland, Frankrijk en Japan, is er heel afhandelijk over doen. Hoe hij in Lille stedebouwkundig en architectonisch de sleutelfiguur is geworden. En dat vooral in verwijd van zeg ruwweg de aanstaande vijftien jaar. Een gigantische klus. Een station voor de TGV gesuite geven en de hele omgeving invullen. Een gebied na groot als de Kop van Zuid in Rotterdam met een verkeersstructuur als een Gordiaanse knoop.

Koolhaas: „Mijn selectie berust op een soort *misverstand*. Eind '88 kreeg ik een brief waarin gezegd stond dat er bijzondere dingen zouden gebeuren in Lille. Of ik voor informatie wilde komen. Ik ben naar Lille gegaan maarheb daar op eigen houtje gegevens ingewonnen.

Later werden enteilijke wereldberoemde architecten en stedebouwkundigen uitgenodigd (onder wie Forster, Uengers, Rogers) voor een gesprek met 24 mensen, onder meer van projectontwikkelingsmaatschappij Euralille die het hele gebied organisatorisch en financieel-economisch aanpakt. Lille zal spuiten in de zaak der volkeren. Toekomstig kruispunt van twee TGV-trajecten (de flitstrein richting Londen en die richting Brussel), toekomstige doorgangsplaats voor het Kanaaltunnelverkeer.

Koolhaas kort over dat vreemde sollicitatiegesprek: „Ik sprak Frans. Ze gingen er van uit dat ik als Nederlander een aangeboren sympathie voel voor de stijl van Lille. Daarom werd ik verkozen."

Hij maakte zijn eerste stedebouwkundige plannen voor het gebied waar e nationale en regionale treinen aankomen, waar de TGV in twee richtingen verder gaat, waar de shuttle (metro onder bestuurder) doorheen gaat, waar de ouderwetse trams vertrekken, waar bussen aankomen en waar alle particulier vervoer van de Ring langskomt en eventueel afzwenkt. Een verkeersknooppunt zonder weerga. Daar diende een aantal gebouwen aan te worden toegevoegd die moesten zorgen dat Lille en z'n voorsteden de vruchten zouden plukken van de plek als een nieuwe spin in het Europese web.

Het ontwarren van die verkeersknoop was de eerste taak van Rem Koolhaas. „Ik moest dat doen vanuit weinig kennis, zeg maar een grote incompetentie, terwijl anderen al jarenlang hun tanden erop hebben stukgebeten. En daarbij denk je als Nederlander waar verkeersdiensten, waterstaat en spoorwegen zulke zaken doen: dat minder genuanceerde mensen dat wel voor je opknappen."

Dat die eerste TGV in Lille zal stoppen (en komischerwijs is niet alleen de datum al bekend, maar zelfs de minuut waarop, 15 juni 1993 om 15.15 uur, digitaal natuurlijk) en daarna alle volgende, is niet zonder slag of stoot een feit geworden. Ontwikkelingsmaatschappij Euralille heeft er een bedrag van ƒ 260 miljoen gulden voor moeten neerstellen, waarmee de spoorwegen de benodigde infrastructuur zullen aanleggen. Per dag zullen er 102 TGV's in de Noord-franse stad langs de perrons komen. Verwachting: jaarlijks 300 miljoen reizigers. Evenveel passagiers als verwacht worden door de Kanaaltunnel, maar daar komt ook nog eens 15 miljoen ton goederen doorheen.

En dat in een stad die zelf slechts 170.000 inwoners heeft, maar kan bloeien dankzij zijn omgeving waar nog een aantal middelgrote provincieplastsen ligt, die teamen een agglomeratie vormen zo groot als Rotterdam met aanpalende steden.

Wethonder dr. J. M. Linthorst met de raadscommissie Ruimtelijke Ordening en Economische Ontwikkeling op bezoek bij de burgemeester van Lille, Pierre Mauroy, Laatste heeft zijn verleden zeer mee, als voormalig eerste ministier. Over die twee is Rem Koolhaas 'die afgelopen week hoorde dat zijn eivormig gebouw er zal komen) blijvender te spreken. Balletto heeft alles strategisch voorbereid en hoe ingewikkeld en complex alles ook is, het gebeurt precies op de manier en in het tempo waarmee het is gepland. Mauroy weet daarbij de beslutlijnjes naar Parijs kort te houden.

„Alle medewerkers, tonen een verbijsterende betrokkenheid bij het project. Daarbij is deze stad goed in het organiseren van een soort enthousiasme bij zijn burgers voor het nieuwe, voor de vooruitgang. Hoe komt het nou dat op anderhalf uur rijden van Rotterdam, hier in Lille een andere cultuur is wat betreft de aanpak? Mogelijk deels snobisme en deels het feit dat men graag risico's neemt. Misschien heeft het ook iets te maken met machocultuur. Maar buitengewoon inspirerend is het wel."

Wethouder Linthorst: „Het is altijd belangrijk dat er een persoonlijke identificatie met zo'n project kan plaatshebben. Dat bekende mensen zich er voor inzetten. In Rotterdam is dat ook, de uitstraling van Riek Bakker, directeur Stadsontwikkeling is niet anders. Wat voor mij een openbaring was, is dat ze buitenlanders vanuit hun onbezmen verfrieden een nieuwe horizon laten schetsen. Daarbij werken deze buitenlanders van locale architecten samen."

Inmiddels is Rem Koolhaas na een start, waarin zijn plannen aanvaardelijk een soort afgrijzen oprlepen en werden vergulsd en verwerpen, de uitverkoren man die het nieuwe zakenhart van Lille vorm zal geven. Het tij is gekeerd. Men geloofd hem. Ziet nu de waarde van de stedebouwkundige aanpak in.

Hij sprak een paar weken terug met Mitterrand, president van Frankrijk, anderhalf uur over de aanpak van Lille. „De koning van Frankrijk," zegt Koolhaas licht ironisch, „moet immers weten wat er in Zijn Rijk gebeurt."

FOTO ARCHIEF HAN

Rem Koolhaas (links) en Joop Linthorst: Overeenkomsten tussen stationswijk in Lille en Kop van Zuid in Rotterdam. Boven: Flitstrein: op de minuut af geprogrammeerd voor de aankomst in Noord-Frankrijk.

FIGURE 3 Rotterdam City Council in visit in Lille at the presentation of Euralille with Rem Koolhaas, Newspaper Het vrije volk: democratisch-socialistisch dagblad, February 2, 1991. Rotterdam: De Arbeiderspers. Source: https://resolver.kb.nl/resolve?urn=ddd:010963675:mpeg21:a0340

2 The design process of Rotterdam Central Station: steps and design roles

Step 1: 1996- 2001

With the advent of the HSL and RandstadRail, a tram system connecting Rotterdam and The Hague, the demand to enhance the capacity of Rotterdam Central Station to accommodate a growing number of passengers has become paramount, with an estimated 320,000 passengers expected in 2025.

In 1998, a report titled "*Rotterdam Central Station, Exploration of the Program*" (in Dutch, "*Rotterdam CS, Verkenning van het Programma*") recognized numerous urban possibilities for creating an appealing blend of residential, commercial, and entertainment spaces in the vicinity of Central Station. This report was a collaborative effort, compiled by representatives from several key entities, including the Rotterdam City Development Corporation (OBR), a public-private partnership actively engaged in land development on behalf of the municipality since the early 1980s. The report also involved the department of Spatial Planning and Housing (dS+V), the Ministries of Housing, Spatial Planning and the Environment, and Economic Affairs, as well as the National Railways organization for stations and station area development (NS Vastgoed and NS Stations). Within this vision, the station was envisioned as an inner city transport terminal.

To ensure accessibility to this terminal, an ambitious plan was crafted. This plan included a 3,000-car garage constructed above the tracks, complemented by 30 acres of entertainment facilities, 60 acres of office space, and 1,000 housing units. A focus group was formed, comprising representatives from various parties and real estate companies with vested interests in the station area, including prominent names such as ING, Amvest, and Rodamco.

2.1 Design for political propaganda

The design process for the Rotterdam Central Station area underwent several phases, each marked by distinct challenges and shifts in focus.

In its early stages, the design aimed to attract new investors and serve as a political propaganda instrument, albeit with limited attention to the complex social and urban factors in the Rotterdam Central Station area. This followed the 'Platform Zero' experiment, emphasizing the significance of urban leisure and entertainment facilities as part of the envisioned redevelopment.

In 2000, a development program was established, leading to invitations extended to six international architects, including Rem Koolhaas (OMA), Joan Busquets, Skidmore Owings Merrill (SOM), Norman Foster, Santiago Calatrava, and the British architect William Alsop. In 2001, the city selected and presented William Alsop's master plan for the Central Station area, referred to as the "Champagne Glasses," with a specific focus on culture and leisure as a marketing tool (Figure 04). This collaborative effort involved various entities, such as the Rotterdam City Development Corporation (OBR), the department of Spatial Planning and Housing (dS+V), ministries of Housing, Spatial Planning and the Environment, and Economic Affairs, along with the National Railways organization for station and station area development (NS Vastgoed and NS Stations).

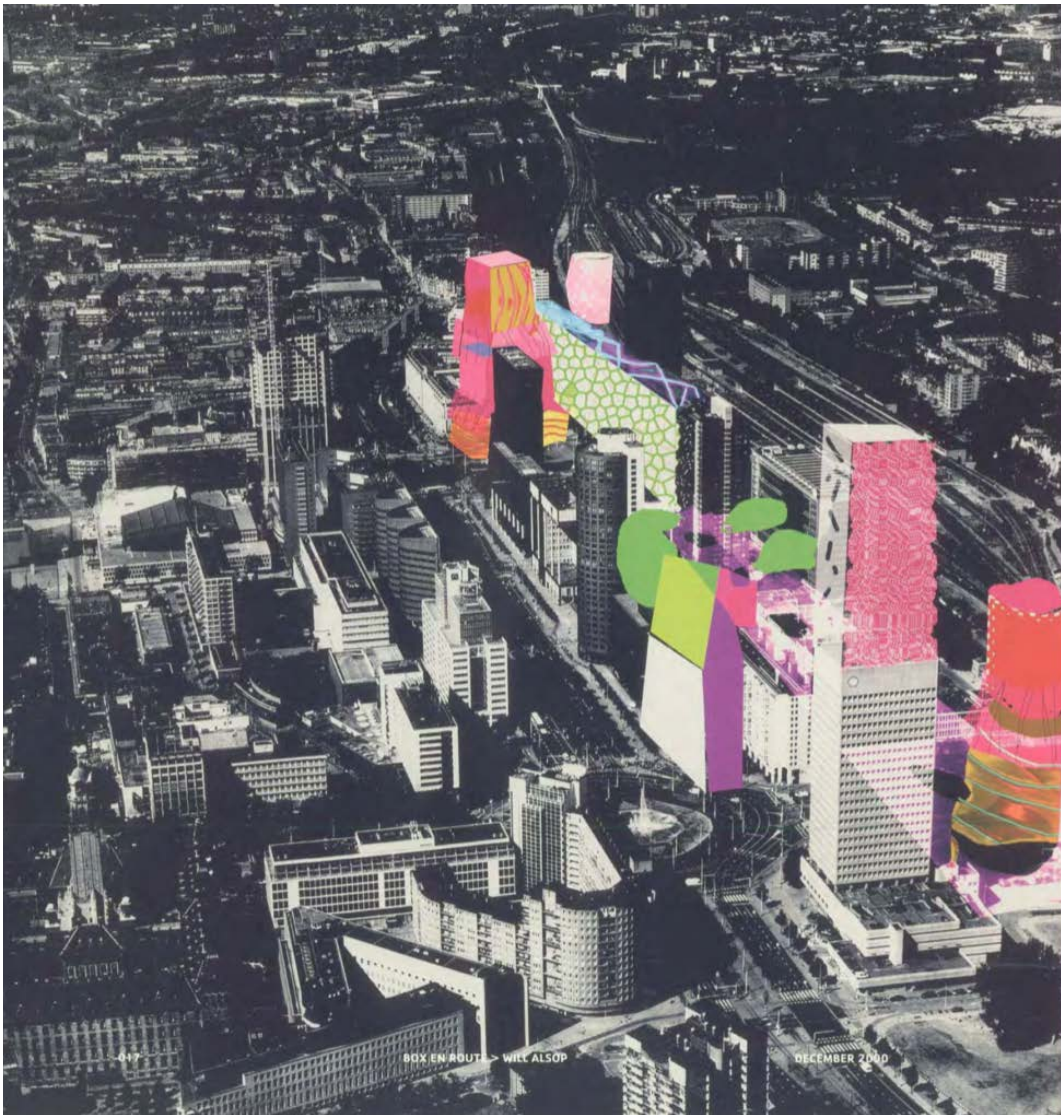


FIGURE 4 Alsop;s masterplan Rotterdam Central Station District. Source: https://newsbeezer.com/netherlandseng/in-memoriam-will-alsop-1947-2018/

However, a shifting political climate, marked by the transition from the Labour Party's long-running rule to Leefbaar Rotterdam's victory in the council elections under the leadership of Pim Fortuyn, led to a reevaluation of Alsop's master plan. In this new context, Alsop's ambitious and costly vision was considered unfeasible and ultimately rejected by the newly elected government. Consequently, the local authorities initially narrowed their focus to the station building itself.

The design of the terminal, or the *Mobility Hub*, as envisioned by Alsop, was analyzed in depth but deemed too complex and inefficient for the *modal split*, given the different modes of transport stacked atop one another (tram, bus, train, metro, bike, pedestrians, car). Subsequently, the project area for the station in Alsop's plan was initially extended to Hofplein but eventually reduced to the station building and its immediate surroundings. Only when it became evident that intervention in the broader area was necessary did adjacent stakeholders, including major multinationals like Nationale Nederlanden/ING and Unilever, as well as smaller creative companies, become part of the project's plans.

This first phase culminated in a redefined and more localized focus, shifting from the grand vision of the 'Champagne Glasses' to a concentrated approach centered on the immediate station area.

Step 2: 2002- 2004

The second step, commencing in 2002 and spanning through 2004, introduced a novel working methodology where all involved parties aimed to precisely determine their needs. A series of workshops coordinated by Holland Rail Consultant and various actors led to a new strategy, adopting a 'building blocks' approach. In this redesigned setup, the City, Dutch Rail, the city region of Rotterdam, and the involved ministries assumed responsibility for the new strategic plan. Ambitious development goals were significantly scaled down within a newly defined project area (400,000 square meters of Gross Floor Area) with adjusted cost estimates (totaling €400 million).

This phase ushered in a new era for the project, marked by an extensive series of meetings and workshops, involving governmental parties and the Dutch Rail infrastructure company (Prorail/Holland Rail Consultant). Atelier Quadrat, working alongside ProRail and the City's representatives, embarked on the next phase of development for the Public Transport Terminal. Beginning with an exploration of the program, this phase entailed the development of numerous variables, driven by Atelier Quadrat, as commissioned by the Municipality on the City's side, with Holland Rail Consult and ProRail representing the Station's interests. A process planning was outlined by the Railway parties, indicating parallel design processes for the masterplan and the public transport terminal (OV terminal), aimed at defining the Program of Requirements (Programma van Eisen) (Figure 05).

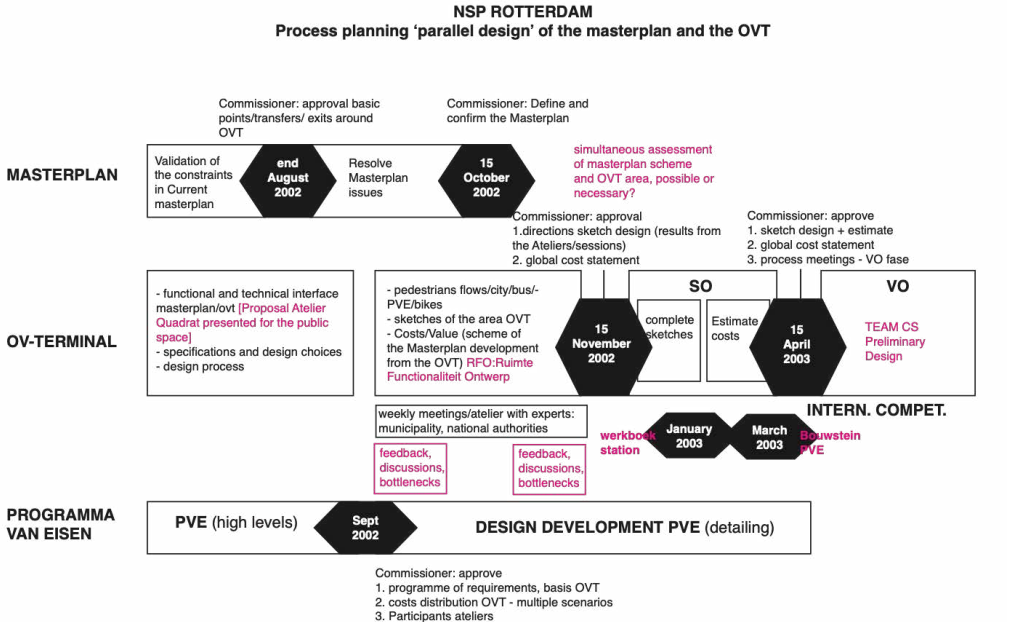


FIGURE 5 The scheme indicates the process planning of the 'parallel design' of the masterplan and the public transport terminal for the National Key Project Rotterdam Central Station. It is based on documents provided by Johan Meijer (ProRail) in 2015. Image author: Manuela Triggianese.

2.2 Parallel Design

During a four to five-month workshop involving local stakeholders, property owners, NS, ProRail, and the City, design results were extensively discussed. This phase included a bi-weekly design team, featuring consultants, users, and delegates, culminating in the formulation of several possible scenarios that

contributed to the development of ideas for the upcoming design competition for the new central station. The primary theme under scrutiny was the character of *intermodality* within the station, with a key concern being the potential conflicts at the intersection of various modes of transportation, including trains, trams, metro, and city traffic. Additionally, considerations extended to travelers' facilities and supplementary services. Notably, part of the commercial program was envisioned to occupy two levels (metro and train) in passageways, while accommodating up to 7,000 bikes with the possibility of expansion to 10,500 spaces. To facilitate pedestrian flows and maintain sightlines, two models were proposed during the workshops: one advocating the retention of the current station building, in line with the preferences of Quadrat and ProRail, and another proposing the renewal of the hub.

This development phase culminated in the creation of the Spatial Functional Design (RFO), which served as the foundation for a new design for Rotterdam Central Station. The RFO included elements such as possible ProRail developments, the translation of specifications into a blueprint and sector plan (vlekkenplan), elaboration of specific scenarios with cost estimates and reference images (elevations, facades, concept design). These scenarios, along with their associated budgets, encompassed interventions at the station level, city level, transportation, and urban design. The RFO then evolved into the project brief (Bouwstenen voor het Programma van Eisen) for the International Competition of the New Central Station in 2003.

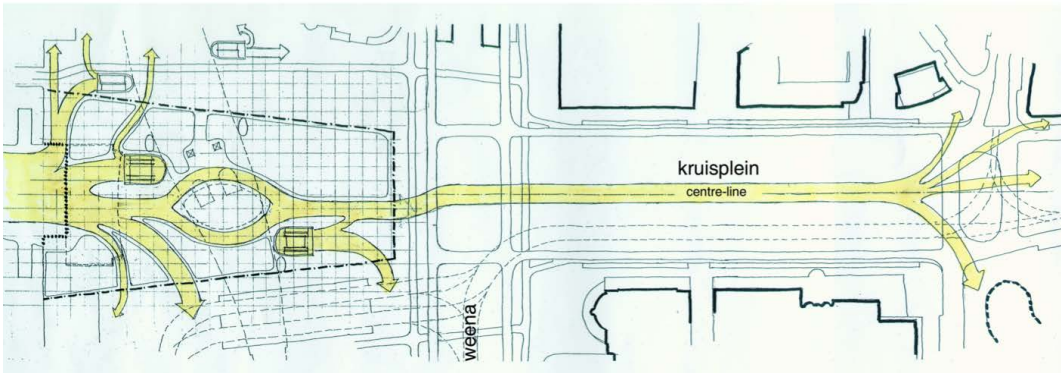


FIGURE 6 Pedestrian connection from the station to the city center, sketch included in Rotterdam Central Station Vision, 2003 © ProRail \ Holland Rail Consult and Atelier Quadrat

Step 3: 2004 – 2007 Era of Co-creation Design of the Terminal

In the subsequent era of co-creation, from 2004 to 2007, the design of the terminal took center stage. Team CS, comprised of Benthem Crouwel Architects, MVSA Meyer en Van Schooten Architecten, and landscape firm West 8, was selected from among other architectural firms. Their responsibility encompassed the (re) design of the station, exterior spaces, and entrances to the subway, kiss-and-ride facilities, and Kruisplein parking. A key objective was to integrate both entrances within the station building, prominently facing Weena boulevard (Figure 06). With the existing track positions and the metro in mind, Team CS endeavored to fulfill the City's vision of harmonizing subway entrances within the station building, extending the expansive roof over the plaza. This design aimed to foster seamless connections between the metro, tram, and buses, envisioning a canopy as a unified roof, eliminating the need for individual canopies above various platforms, all while providing a clear view of the city. The station's interior path, expanded from 8 meters to 50 meters, would host businesses and guide travelers to a direct view of the trains. This design philosophy embraced ample natural light through voids in staircases and the roof's transparency. Furthermore, a footbridge was constructed above the tracks on the station's west side, serving both as a transit pathway and an emergency escape route.

The station, or hub, was designed to accommodate transit passenger flows, commercial spaces, waiting areas, recreational facilities, offices, and parking for cars and bikes (Figure 07). Team CS followed the Building Blocks Approach, as illustrated in the Spatial Functional Design, uniting the seven involved parties in the decision-making process. Instead of constructing everything atop one another, as in the Alsop design, Team CS opted for a simplified structure for the central station. It aimed to enable critical separations at various points in the project, encompassing public and private properties. The architectural vision was centered on a single, unifying roof that connected tracks and waiting platforms, creating a large square where diverse needs for space and services could be met.

Simultaneously with the design of the hub, Team CS conducted a series of urban studies for the area surrounding the station. In 2007, Maxwan designers collaborated with the City to explore the transformation of the station's environs. The concepts of dual access from the north and south, and the distinction in urban character between Provenierswijk to the north and the high-rise center to the south, were pivotal aspects of this exploration.

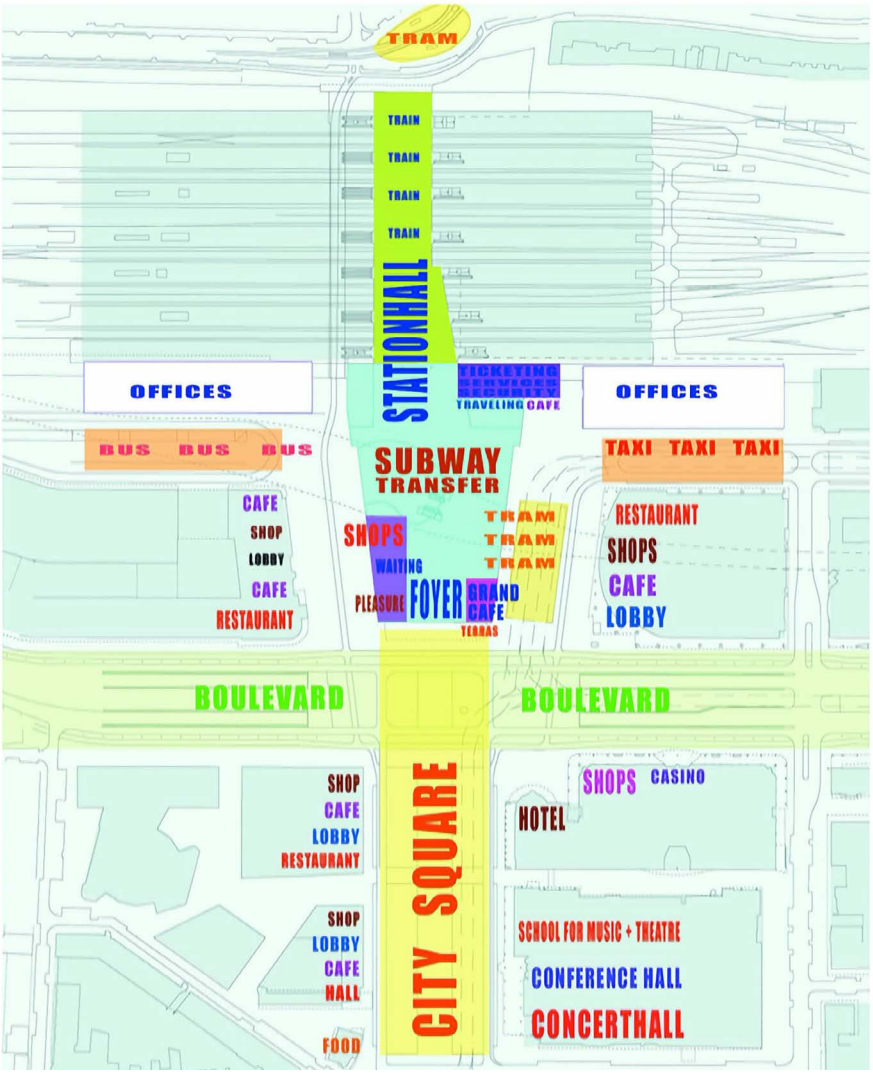


FIGURE 7 Program distribution and the building block approach, included in the Bouwstenen voor het programma van Eisen, 2003 © ProRail\ Holland Rail Consult and Atelier Quadrat

2.3 A conversation with Jan Benthem

The development of the area around Rotterdam Central Station was a fundamental component of the overall project, with the station itself being the largest and most complex building block. The construction of the station terminal involved numerous parties, adding to the incredible complexity of the project. Notably, the station terminal was divided into two distinct domains: a 'railway side domain' and a 'city side domain,' each overseen by a different entity. The Ministry of Transport, Public Works, and Water Management was responsible for the railway section, while the city section fell under the jurisdiction of the Rotterdam city council.

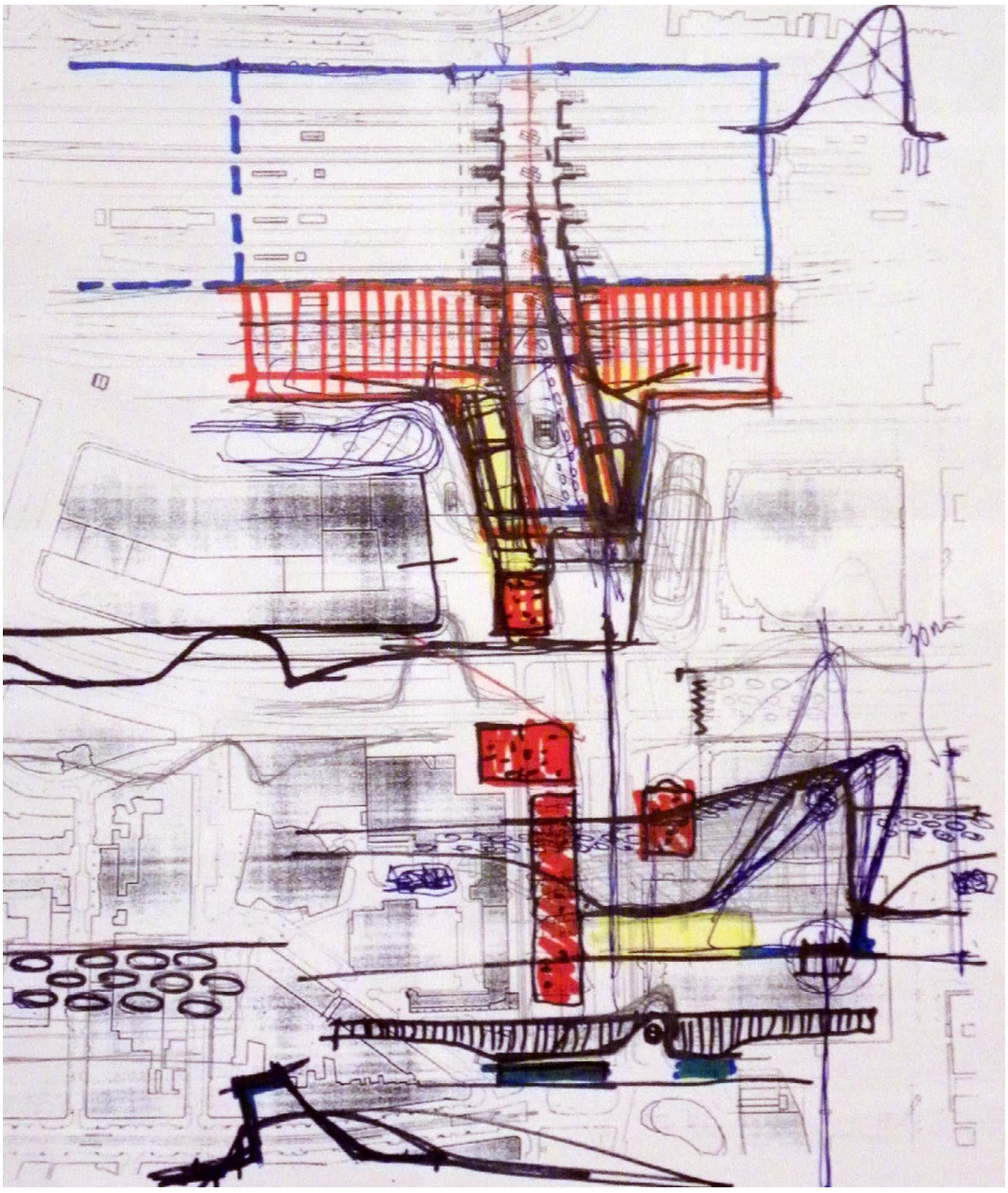


FIGURE 8 Sketch Rotterdam Central Station, 2003 image courtesy © Benthem Crouwel Architects

Jan Benthem, the project leader at Team CS and founder of Benthem Crouwel Architects, shed light on the intricacies of the project in an interview. He emphasized the need for collaboration among different owners and clients, each operating within their specific budgets and targets. Benthem explained that this collaboration could only be successful if each client could make decisions within their domain and budget. To illustrate the complexity, he noted that building one large roof was not feasible within Prorail's budget constraints. With a standard budget, there were resources available only for individual canopies on the platforms. Benthem's experience taught him that initiating the process was the key, as decisions could lead to problem-solving, rather than attempting to solve all the problems at once at the project's outset.

The station's construction reflected the division between the two owners, with the municipality and Prorail each responsible for different sections, utilizing distinct contractors and methods for development. Benthem described the project as more akin to urban design than architecture, with the design playing a pivotal role in facilitating the process and adjusting the initial brief. He highlighted the unique challenges in such large-scale projects, where traditional architectural aspects were not the primary concern. Instead, the primary focus was on the decision-making process and how the architect could influence decisions, playing a crucial role in that regard.

Benthem emphasized that in these projects, effective communication was essential since various parties had different languages and expertise. The architect had to collaborate with a substantial team of engineers and designers, necessitating a fundamental understanding of their respective fields. This understanding empowered the architect to contribute effectively to the decision-making process. Benthem explained that for such projects, the process followed a similar trajectory as traditional building projects, beginning with a preliminary design. However, the key difference was that the problem definition for the site was not always predetermined.

In conventional projects, there is a program of requirements (the brief), which serves as a clear starting point for design. In the case of Rotterdam Central Station, the brief was either unclear or flexible, making the role of the preliminary design crucial in helping the involved parties define the project's requirements. Benthem noted that local owners responsible for the station frequently visited their office, engaging in regular two-hour sessions every two weeks to discuss schemes and designs. This intensive collaboration occurred around five to six times during the preliminary design phase.

2.4 Rotterdam Central Station Masterplan

In 2006, urban studies were initiated around the area surrounding Rotterdam Central Station, spurred by local stakeholders' interests. The catalyst for these studies was the research conducted on Delftseplein by the Dutch team KAAN Architecten, known at that time as Claus en Kaan in Rotterdam. These studies aimed to rekindle the original ambition of the Rotterdam Central Station project as conceived by the Central Government in 1990. They sought to assess its feasibility by engaging local designers and stakeholders.

Nearly two years after the completion of the design for the new station in 2007, the possibilities for constructing offices and residences in the immediate vicinity of the station were thoroughly mapped out. Concire's special team compiled the foundational agreement document titled 'Weena | Glocal City District.' This document laid the groundwork for productive discussions among all involved parties, using the term 'glocal' to encapsulate the area's versatility, ranging from globally operating companies to local entrepreneurs.

The Rotterdam Central District Association was established, uniting key stakeholders with the objective of generating interest in the area as a prime business location. In 2007, the Municipality entered into an agreement with several prominent players in the area, including Unilever, ING, Groot Handelsgebouw, LSI Project Investment, and Maarseen Groep. The agreement emerged from a series of meetings with local stakeholders, municipal representatives, and experts, aimed at devising an effective strategy for the station neighborhood.

A new urban development plan was crafted by Maxwan architects and urbanists, in collaboration with the department of Spatial Planning and Housing (dV+S), aligning with the 'glocal' concept that had evolved from the intensive discussions. This plan incorporated a 'mixone' approach, enhancing the outdoor spaces and street levels, essentially transforming the area's 'groundscraper' buildings. Subsequently, efforts were directed toward establishing an association, the Vereniging Rotterdam Central District, with the goal of enlisting as many entrepreneurs from the station quarter as possible. Major sponsors of this association included the city of Rotterdam, project developers LSI and Bouwinvest, LNG Real Estate, and Maarsen Groep.

Since 2007, there has been unwavering support for reconfiguring the station and enhancing its intermodality through numerous real estate projects in the surrounding area. This support has been championed by the Dutch Railways, the Municipality, and local investors. The Maxwan master plan evolved in tandem with property developers' scenarios for potential buildings, led by local architects and planners. It became evident that beyond their role as designers, architects played a crucial part in identifying, presenting, and communicating interests, significantly influencing the trajectory of the entire process. In the context of the slow decision-making process and the interplay of local and national politics, characterized by well-defined ambitions, the (re)design of the Rotterdam Central Station area, known as the Central District, consistently adapted and transformed, evolving into a vibrant urban hub.

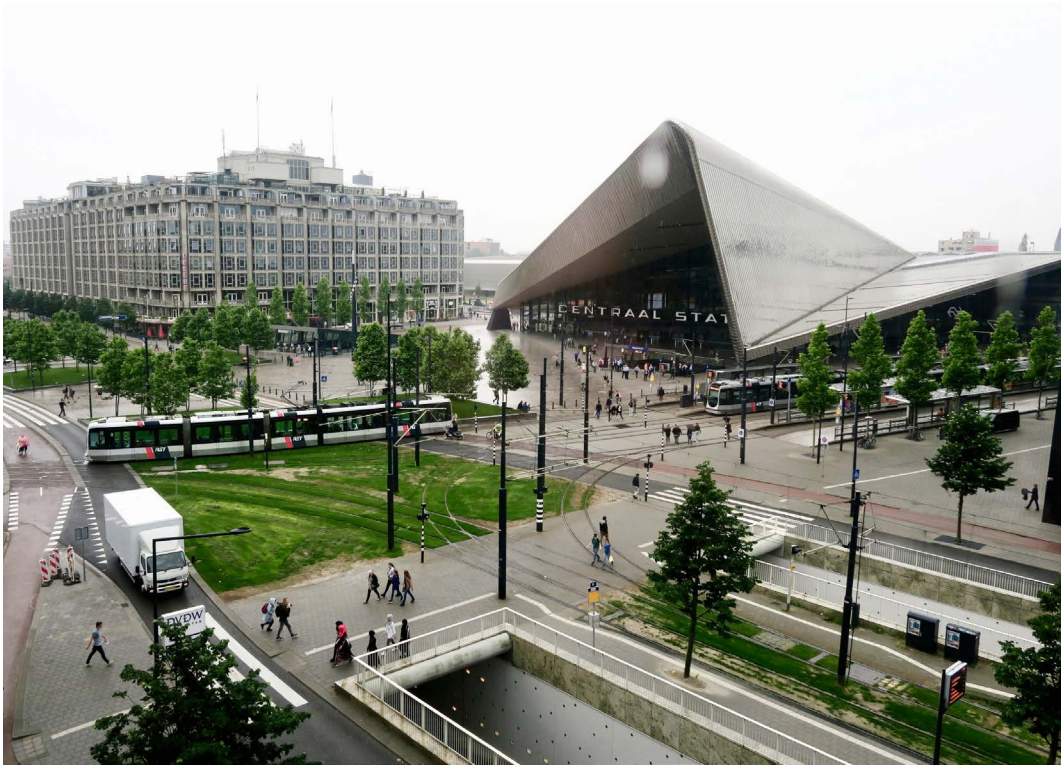


FIGURE 9 Rotterdam Central station after completion.

3 Conclusions

The realization of the station hub has played a pivotal role in an intriguing process of urban regeneration, giving rise to the current Rotterdam Central District (RCD). This district serves as a gateway to the heart of the city skyline and its bustling harbor. The combination of multimodal accessibility and the potential to concentrate urban functions around the central station has presented an exceptional opportunity to cultivate valuable spaces within the city of Rotterdam.

Reflecting on the design and planning of Rotterdam Central Station, this case study offers insights into the challenges faced when ambitious large-scale master plans are employed primarily for political propaganda and when new procedures are introduced to make design a tool for co-creation and integration. Engaging in a dialogue with Jan Benthem, it becomes evident how the station hub's multidimensional character takes shape, not only concerning the physical space and relationships among diverse urban functions but also in terms of stakeholder management and the ongoing dialogue between clients and designers. This collaboration operates on the basis of a flexible and adaptable plan.

This paper delves into the complexities of the station project by examining the initiative phase of the process, recognizing it as a crucial step in shaping the design of a station and its surroundings. It aims to identify the significance of a design that prioritizes "flexibility over rigidity" and sheds light on the use of design methodology as an instrumental tool within the iterative design process of negotiation.

List of abbreviations

Abbreviation	Original full text	English full text
NS	Nederlandse Spoorwegen	Dutch Railways
PRORAIL		Dutch Railways maintenance organization (separate company from NS)
CS	Centraal Station	Central Railway Station
OBR	Ontwikkelingsbedrijf Rotterdam	Rotterdam City Development Corporation
RFO	Ruimtelijk Functioneel Ontwerp	Spatial Functional Design
OV	Openbaar Vervoer	Public Transportation
GFA		Gross Floor Area
NSP	Nieuwe Sleutel Projecten	New Key Projects

TABLE 1 Abbriviations

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Untangling Stakeholder Dynamics in Circularity of the Built Environment

A Comics-Based Approach

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Abstract

Comics are a known method to visually link characters to context through time. This article explores the medium of comics to untangle stakeholder dynamics in the context of a complex theme such as circularity of the built environment.
Circularity of the built environment tailors concepts of circular economy to the field of construction and urban development. Relying mostly on optimization strategies, context-specific characteristics such as stakeholder agency and spatial preconditions are often disregarded as resources in the design of circularity projects. This results in one-size-fits all circularity instruments formalized in generic toolboxes.
Circularity instruments should additionally engage with stakeholders, recognizing complexity and surfacing the resourcefulness of the territory. This comics series follows the researcher from analysis to design hypothesis, clarifying complexity at hand from the researcher perspective, including stakeholder agendas, spatial conditions, barriers and opportunities.
Part of an ongoing action-research project, the self-reflective comics show parts of a researcher's journey untangling circularity in the built environment in its multiple stakeholder dimensions. It includes data sourced from mixed method research, such as ethnographic fieldwork, semi-structured interviews, and archival research on two Flemish industry parks, Kortrijk-Noord and Leuven-Haasrode.
These comics function as a narrative assemblage method for critical analysis, bringing together different data sources, and rendering our research process on circularity contextual and visual. Additionally, the comic allows us to communicate, challenge, and begin to design with (hidden) stakeholder agency.

Keywords

circular economy; site-specific dynamics; comics as research method; socio-spatial research; stakeholder perspectives

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1 Introduction

The circular economy (CE) presents an alternative model to the linear take-make-dispose system, aiming to close material and energy loops, reduce waste, and promote resource reuse and recycling (Prieto-Sandoval et al., 2018). Given the construction industry's impact on resource depletion and waste production, circularity has emerged as a solution in recent urban and architecture debates on sustainability. Consequently, various material assessment methods and circularity policies have been developed across different levels of operations. However, while voices increasingly advocate for a paradigm shift towards systems thinking and valuing the complexity and resourcefulness of the territory (Marin and De Meulder, 2018, Marin and De Meulder, 2021), there remains an underrepresentation of spatial, social, and historical knowledge (Schröder et al., 2020, Urbinati et al., 2017). Most of the contributions to the circularity debate are induced by top-down actors such as governmental institutions, formulating one-size-fits-all circularity goals. This creates a gap between the world of abstraction, using generic circularity-driven principles, and the complex world of terrain experimentation by local actors (Verga, 2022).

The need to move beyond abstract circularity measures towards a more contextualized, spatial, and actor-specific approach emerged through case-study research on two Flemish industrial sites, Leuven-Haasrode and Kortrijk-Noord. This visual essay explores the use of comics as a tool not only to represent but also to comprehend the site-specific dynamics of circularity in the built environment, uncovering the design potential inherent in often hidden stakeholder agency. The primary objective of this comic is to experiment with narrative forms through textual and visual storytelling practices, aiming to deconstruct prevailing discourses and integrate a myriad of data sources, stakeholders perspectives and their spatial context into the otherwise abstract discourse surrounding CE.

2 Comics as a Method in Built Environment Research

Comics have been extensively researched and recognized as a method for visual ethnography in the field of urban anthropology, facilitating the dissemination of academic knowledge in a visually engaging manner (Cancellieri and Peterle, 2021). Sociologists and geographers have also utilized comics to co-construct narratives amplifying the voices of underrepresented stakeholders (Barberis and Grüning, 2021). Moreover, comics have been described as a spatial language that visually links space to characters across time (Groensteen, 2007). Within superhero comic books, architecture consistently serves as a backdrop, with renowned architects such as Le Corbusier, Archigram, and Bjarke Ingels employing comic imagery to promote their work.

In this visual essay, however, an alternative approach is taken, highlighting comics as a research practice (Peterle, 2021). It investigates the use of comics as an assemblage method, allowing for the representation and conduct of socio-spatial research on two industry parks. Comics serve as a powerful tool to untangle contextual complexity, constructing meaning through the montage of seemingly disconnected elements and unrelated parts (Ditmmer, 2010). The arrangement of images and text in comics enables researchers to uncover, question, analyze, and potentially address imbalances in socio-spatial research on complex themes like circularity in the built environment (Fraser, 2019). Moreover, comics prove suitable for addressing the

challenge of assembling heterogeneous datasets when visualizing circularity, as relevant data spans from material knowledge to stakeholder's circularity agendas (Karasti et al., 2021; Calisto Friant et al., 2020).

The comic presented in this essay offers a highly explorative, subjective narrative that captures the ongoing research process (Law, 2004). Following in the footsteps of Philippe Squarzoni's "Climate Changed: A Personal Journey through the Science," the author of these comics also illustrates their own research (Squarzoni, 2012). The researcher-cartoonist's perspective and body become inherently entangled with the research output, allowing for transparency in terms of the researcher's positionality and thoughts.

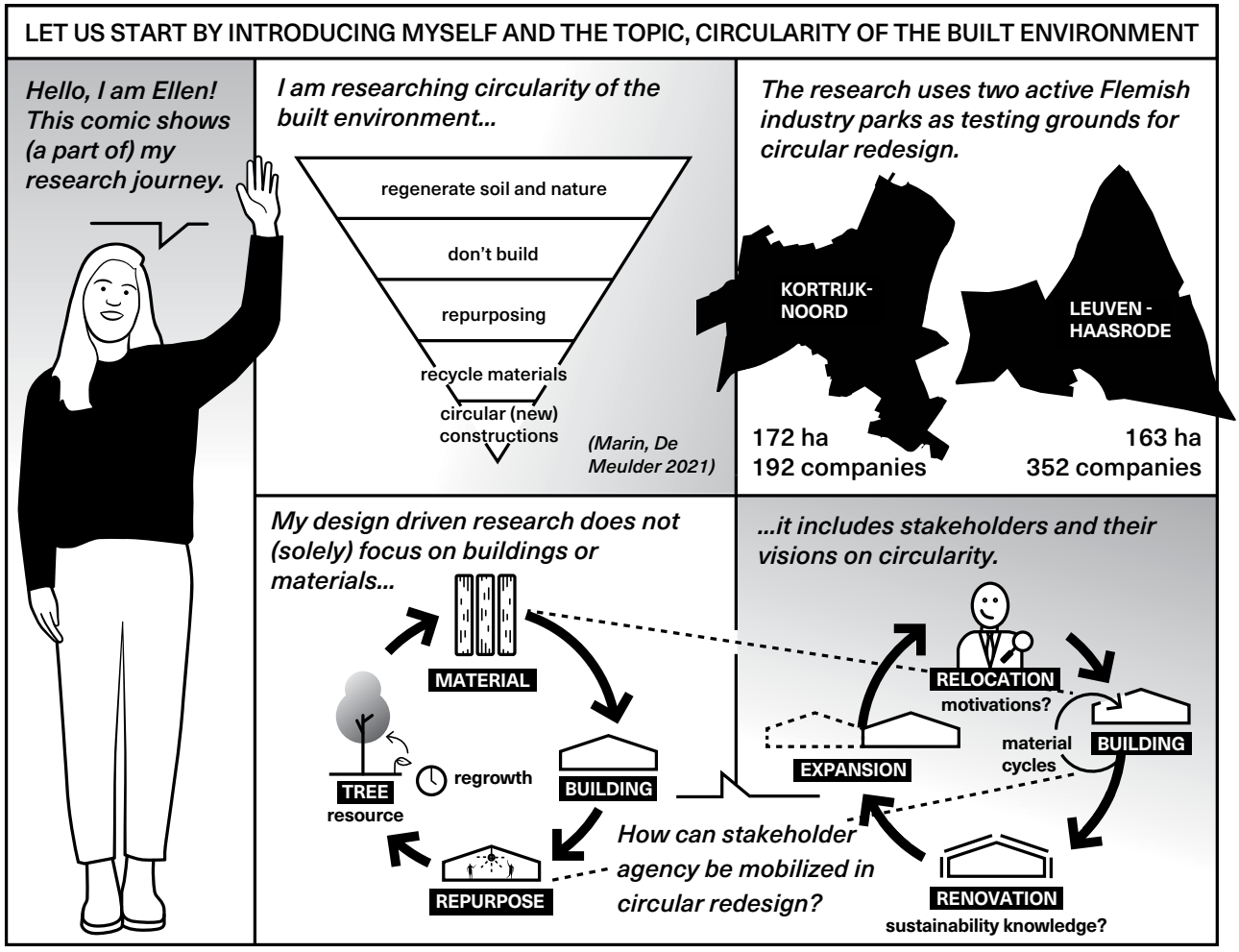
To demonstrate this approach, it is applied to the author's personal research journey within a specific design research project: Regenerating Flemish Industry parks (REFLIP), funded by KU Leuven (2020-2024) (KU Leuven Research Portal, 2020). REFLIP focuses on Flemish industry parks, requiring major spatial and infrastructural updates, and addresses the need to develop multi- and transdisciplinary methods to realize an integrated circular economy transition of the built environment.

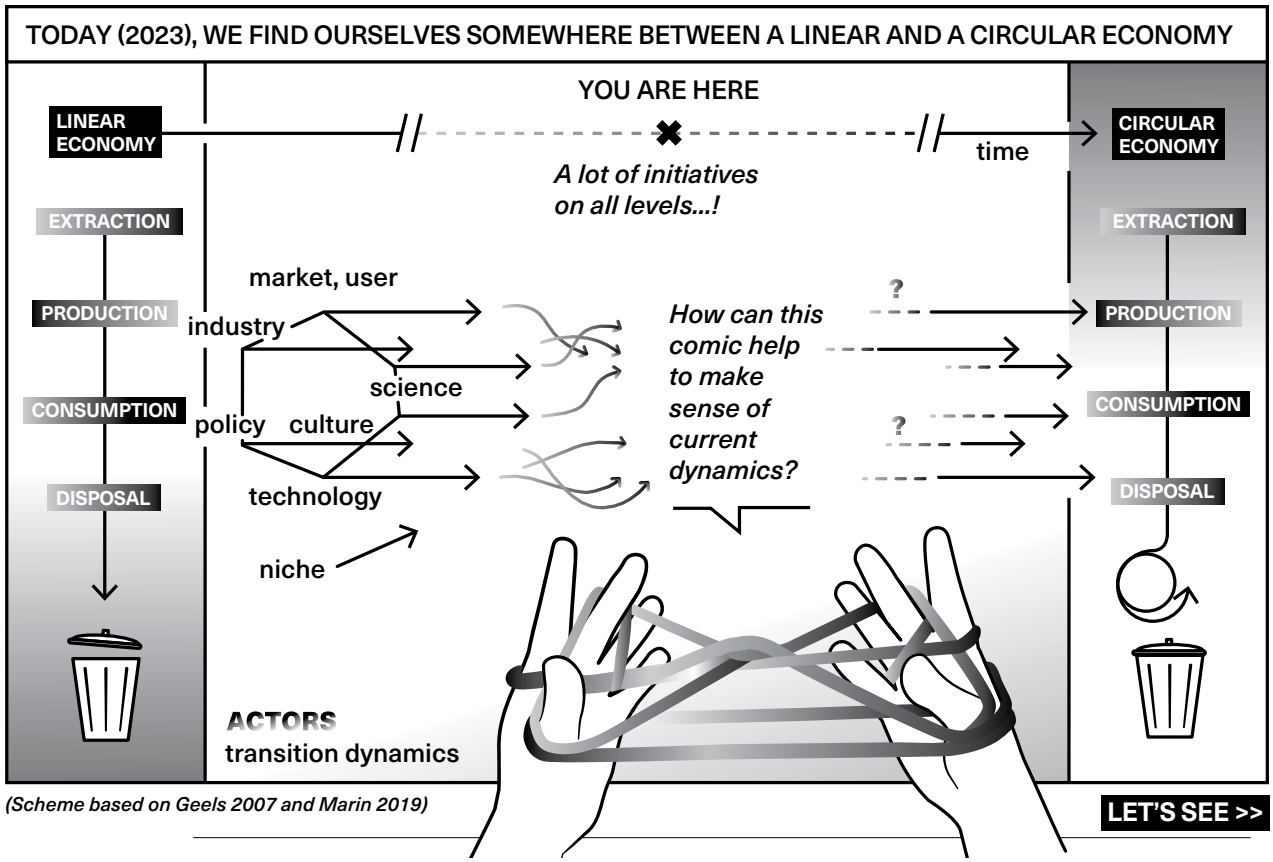
The first two comics, introduced after a research overview (p.76), visualize the (lack of) agency of policymakers and local companies in realizing circularity projects, identified during the analysis phase. "The Circular Toolbox: From Excitement to Disillusion" (p.77-78) problematizes generic sustainability measures and circularity studies formalized in toolboxes, unveiling smultiple barriers and lock-ins hindering the transition from ideas to realization. The second comic, "Redefining Circularity: A Question of Perspectives" (p.79-80), highlights the various interpretations and (mis)usage of the term "circularity." The final two comics, residing between design hypothesis and analysis, advocate for a site-specific approach to circular design processes. "Circularity in the Resourcefulness of the Territory" (p.81-82) complements the dominant material-centered view of circularity with a stakeholder-centered approach, emphasizing implicit circularity practices in family businesses at Kortrijk-Noord. The last comic delves into the archives and surfaces with a design hypothesis titled "Looking Back to Project Forward: Proto-Circularity" (p.83-84).

3 Conclusions

This article argues that comics as a method effectively address the lack of historical, social, and spatial dimensions in current circularity research for the built environment. By utilizing stories as tools to actualize different spatial meanings and formulate design hypotheses, comics activate new trajectories for spatial action. The comic functions as a bespoke visual research method, untangling stakeholder perspectives, defining research scope, and structuring data from multiple sources (semi-structured interviews, policy documents, company websites, fieldwork, archival research, theory...). In subsequent phases, these comics will be complemented by more nuanced accounts, fore fronting stakeholders as the protagonists. While the format of short comics may limit elaboration and carry the risk of caricaturing certain actors or policies, this series aims to synthesize complex stakeholder dynamics associated with circularity in the built environment. It recognizes and values current approaches to circularity on the industry parks, ultimately offering an additional layer of site-specificity to unlock abstract debates and kick-start the design process.

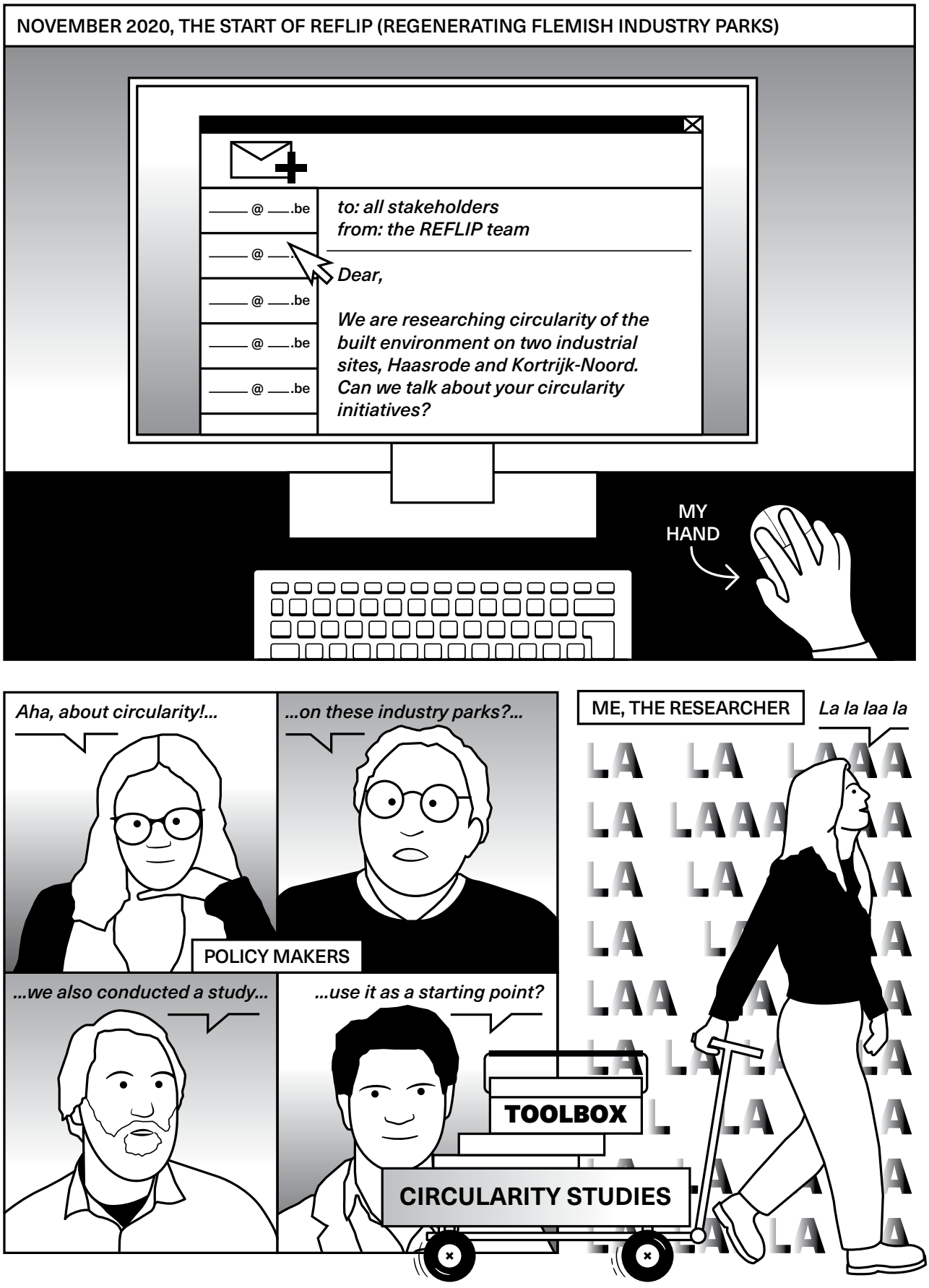
Through comics, the abstract discourse surrounding circularity in the built environment can be enriched with a deeper understanding of stakeholders and their spatial context. By harnessing the power of comics as a research method, this visual essay contributes to bridging the gap between abstract circularity principles and the complexities of the built environment, fostering new perspectives and trajectories for spatial action.

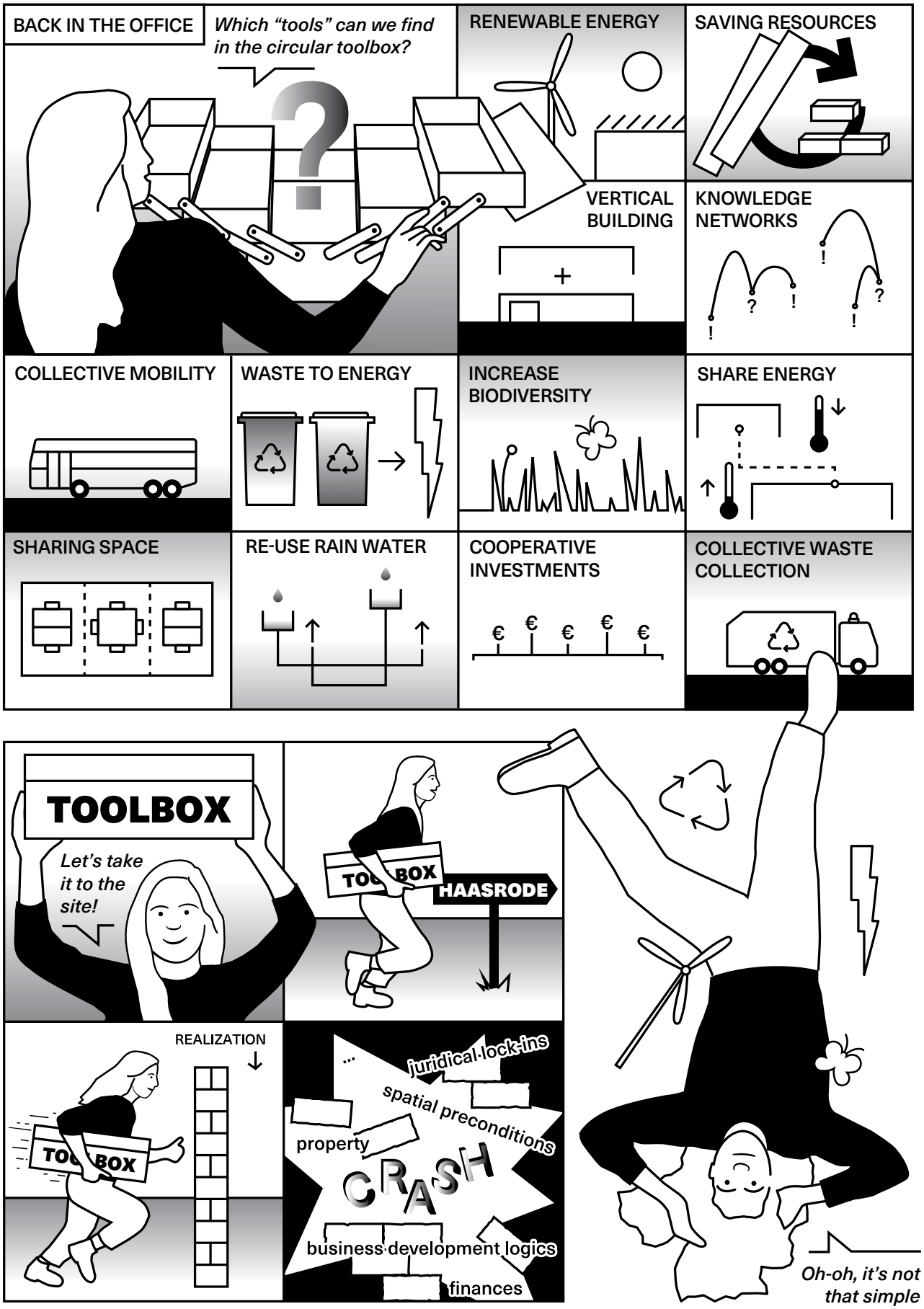




(Scheme based on Geels 2007 and Marin 2019)

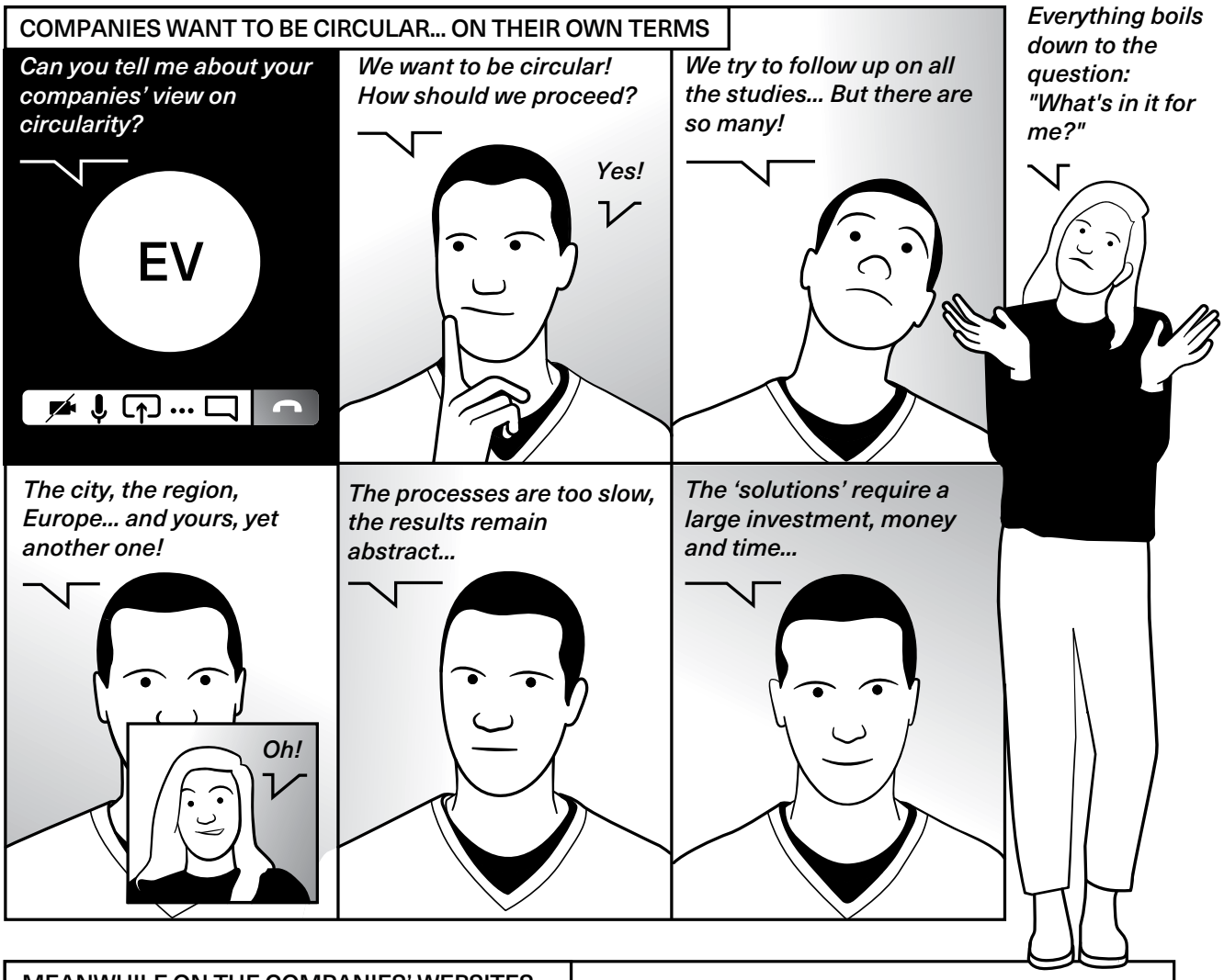
‘THE CIRCULAR TOOLBOX’, FROM EXCITEMENT TO DISILLUSION

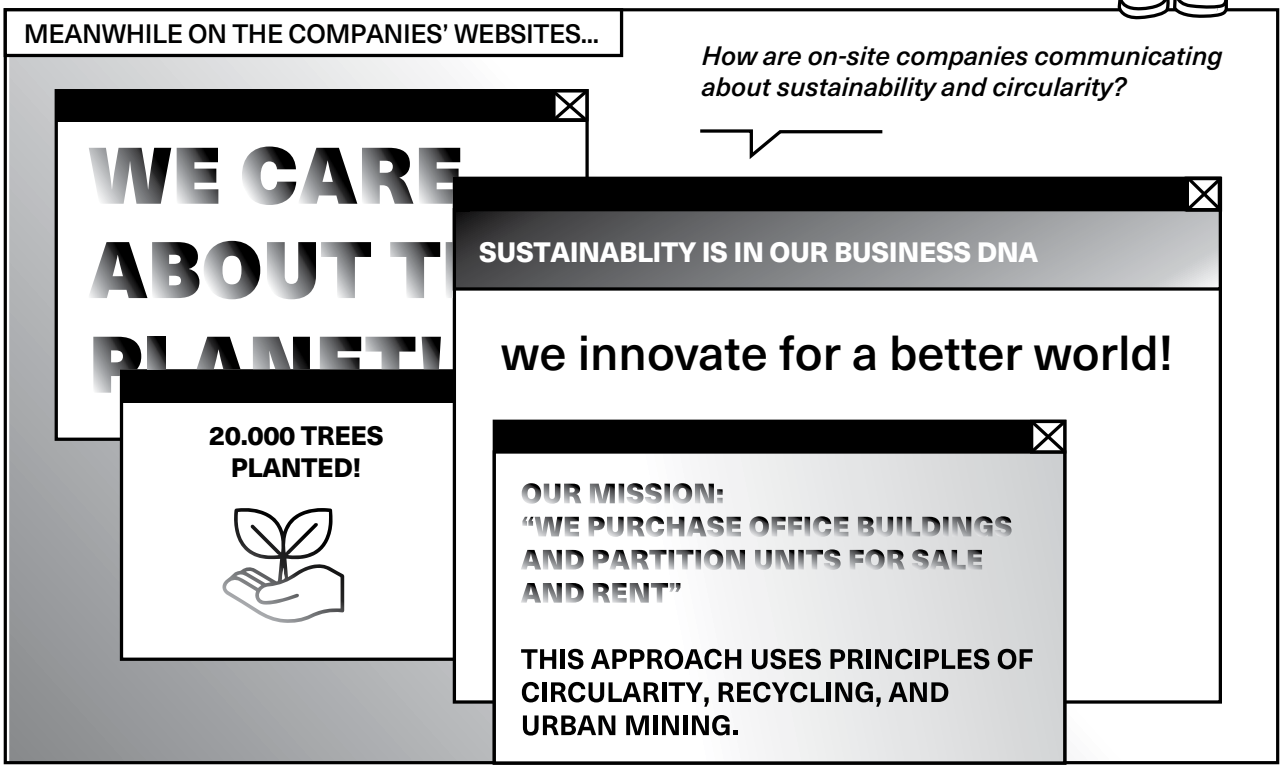




(based on CIRCULER, Interleuven 2021)

(RE)DEFINING CIRCULARITY: A QUESTION OF PERSPECTIVES





IN ANOTHER INTERVIEW...

Ah yes, circularity! We strive to be completely CO_2 neutral.

We own an unbuilt plot next to our building...

*We wanted to fill the plot with solar panels. This would make us 100% energy self-sufficient**

...but the city denied us the building permit. Unbelievable, right? After all their talk about cicularity!?

To: company
From: city admin

PERMIT DENIED

Unfortunately, we can not grant you the permit, due to lack of spatial efficiency of your proposal. The few empty plots, should be used for industrial activity!

**and independent from fluctuating energy prices*

Is this circularity? Hmm...? Maybe "circularity" does not mean the same thing to everyone...?

Circularity of the built environment is an abstract concept...

CIRCULARITY? CIRCULARI- WHAT?

Instead of only considering explicit circularity projects...

ARE YOU REALLY?

LOOK AT US, WE ARE CIRCULAR!

I realized circularity can be hidden, unknown, even to the ones practicing it...

CIRCULARITY

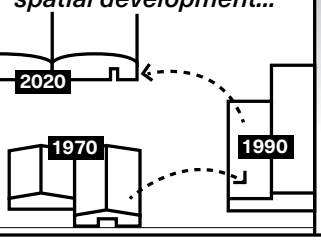
Instead of asking stakeholders explicitly about circularity...

REDUCE?
REUSE?
RECYCLE?

YES!*

***insert generic sustainability discourse**

I started interviewing companies about their spatial development...



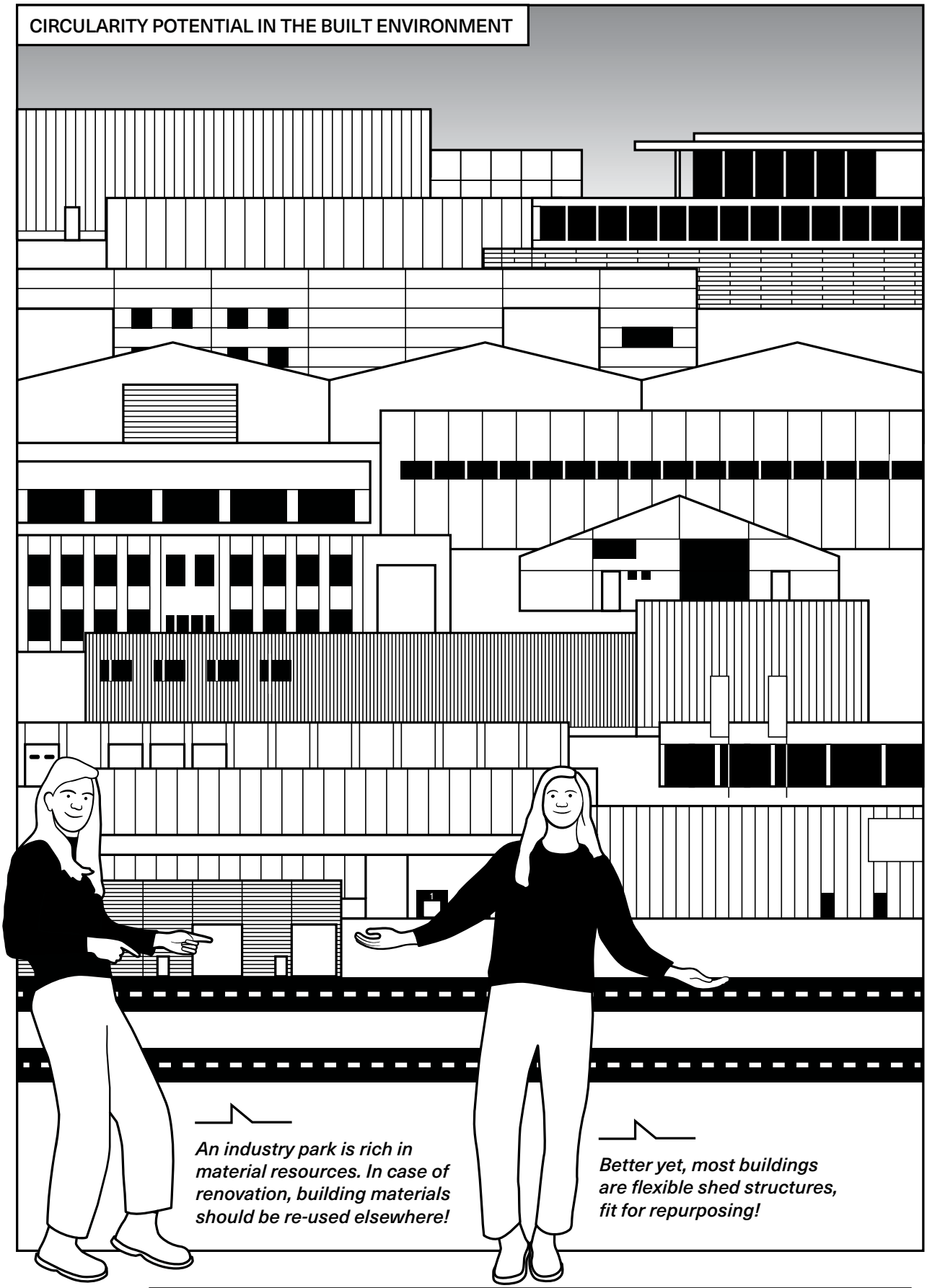
and incentives for renovation and expansion...

SPATIAL NEEDS?
SUBSIDIES?
ENERGY BILL?

and found more...

IMPLICIT CIRCULARITY PRACTICES!

CIRCULARITY IN THE RESOURCEFULNESS OF THE TERRITORY



FAMILY HISTORY IS TIED TO SPATIAL DEVELOPMENT

My grandfather built these buildings...

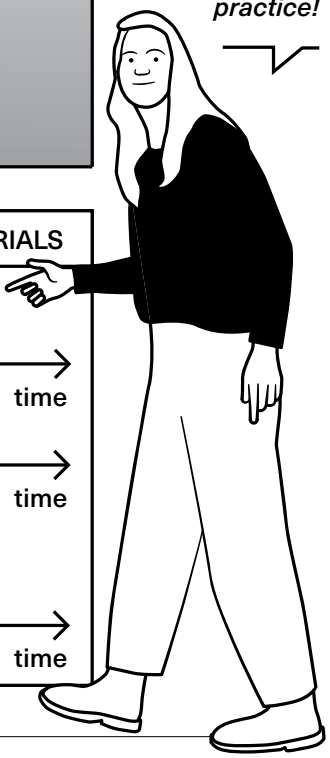
Sure, every generation wants to leave its mark, with respect to what was built before...

We came to the industry park in 1972



**where are the daughters, mothers, aunts...?*

Due to the care these families have towards their built heritage, they extend the life of their patrimony. A circular practice!

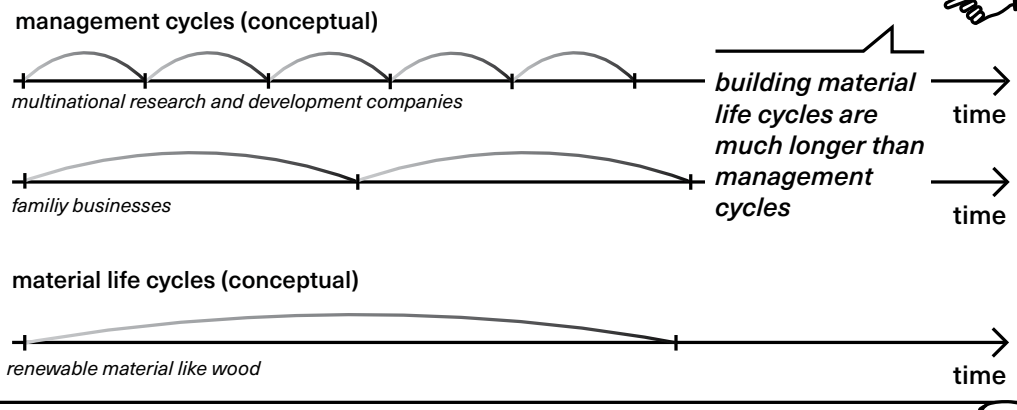


LOOK AT THE BUILDING, MEET THE FAMILY!*

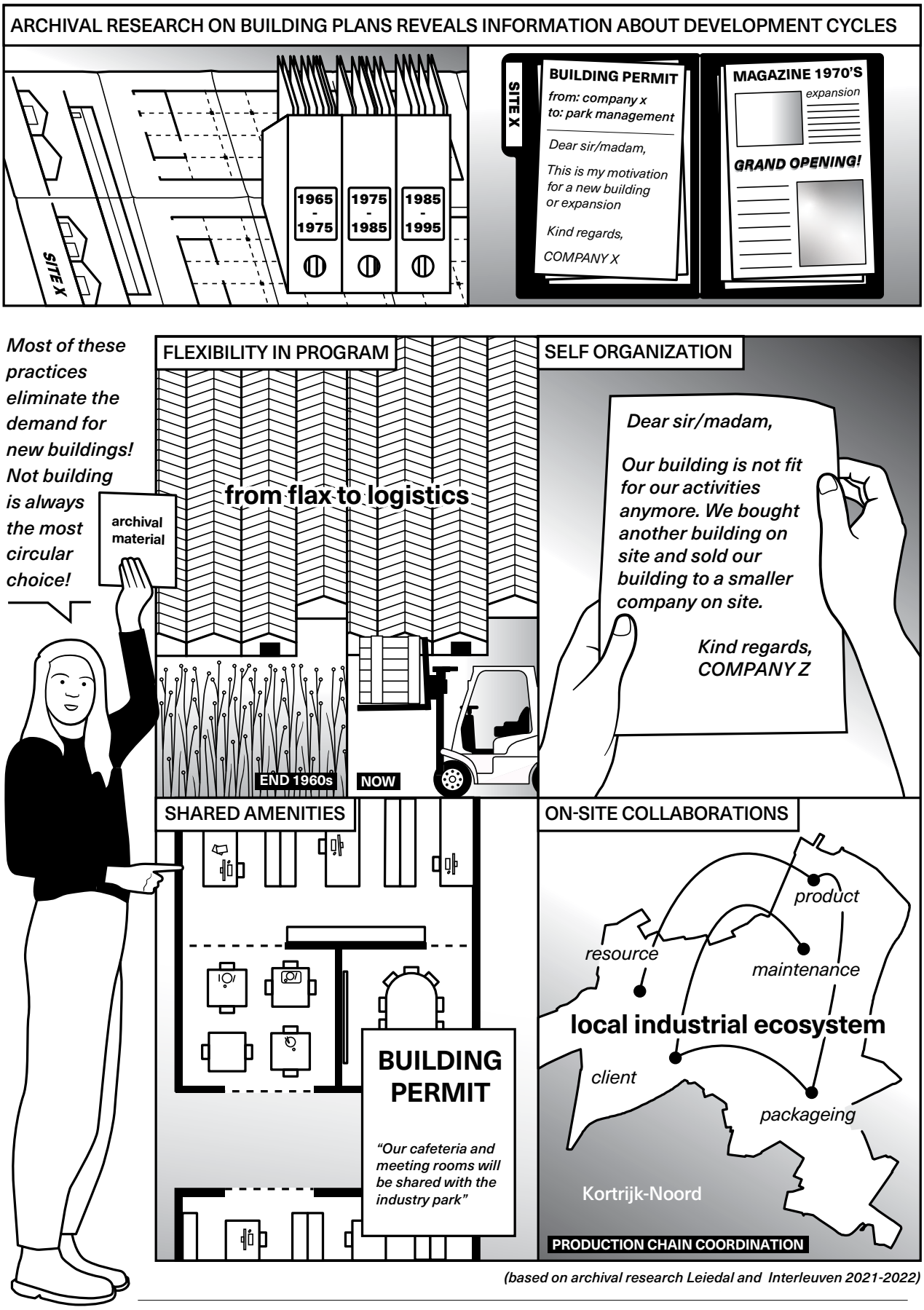
local development culture of incremental renovation and expansion

(based on archival research Leiedal + website info bossuyt.kitchen/nl/over-ons)

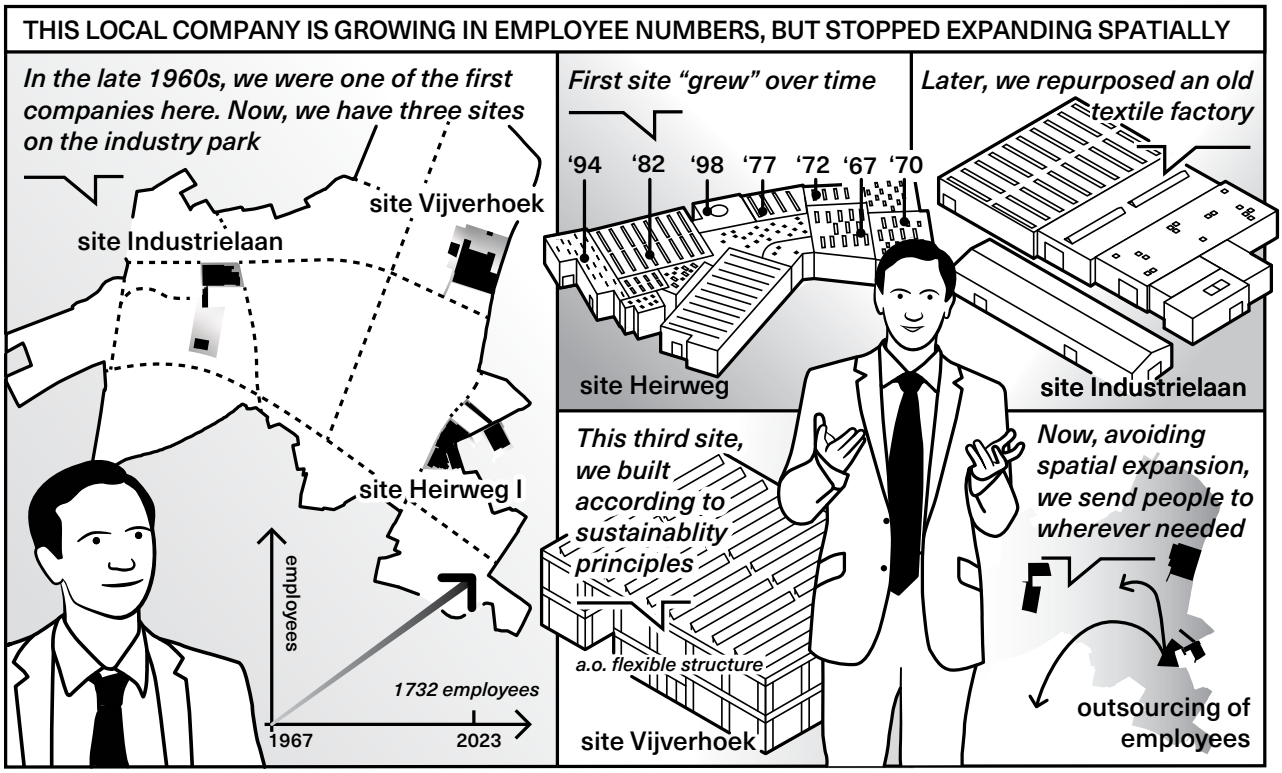
CONNECTION BETWEEN MANAGEMENT CYCLES AND LIFE CYCLES OF MATERIALS

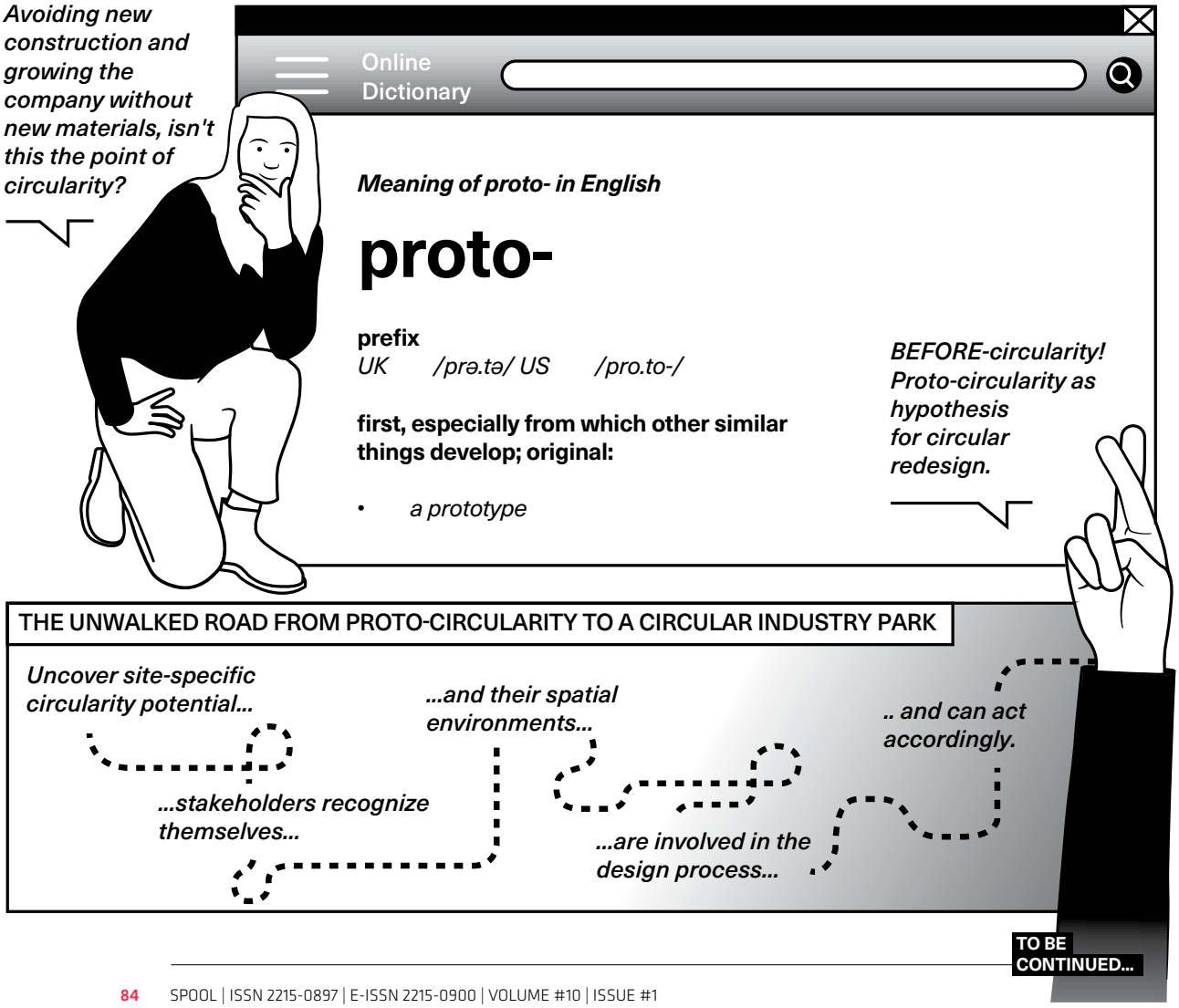


LOOKING BACK TO PROJECT FORWARD: PROTO-CIRCULARITY



(based on archival research Leiedal and Interleuven 2021-2022)


THIS LOCAL COMPANY IS GROWING IN EMPLOYEE NUMBERS, BUT STOPPED EXPANDING SPATIALLY
In the late 1960s, we were one of the first companies here. Now, we have three sites on the industry park
site Industrielaan
site Vijverhoek
site Heirweg I
employees
1732 employees
1967
2023
First site "grew" over time
'94 '82 '98 '77 '72 '67 '70
site Heirweg
Later, we repurposed an old textile factory
site Industrielaan
This third site, we built according to sustainablity principles
a.o. flexible structure
site Vijverhoek
Now, avoiding spatial expansion, we send people to wherever needed
outsourcing of employees


Avoiding new construction and growing the company without new materials, isn't this the point of circularity?
Online Dictionary
Meaning of proto- in English
proto-
prefix
UK /prəʊtə/ US /proʊtoʊ/
first, especially from which other similar things develop; original:
• a prototype
BEFORE-circularity! Proto-circularity as hypothesis for circular redesign.
THE UNWALKED ROAD FROM PROTO-CIRCULARITY TO A CIRCULAR INDUSTRY PARK
Uncover site-specific circularity potential...
...stakeholders recognize themselves...
...and their spatial environments...
...are involved in the design process...
.. and can act accordingly.
TO BE CONTINUED...

Acknowledgements

This research is part of REFLIP, Regenerating Flemish Industry parks, funded by KU Leuven (KU Leuven Research Portal, 2020). REFLIP focuses on Flemish industry parks, mostly dating from the 1960s - and requiring major spatial and infrastructural updates. As construction and demolition waste constitutes about one fourth of all waste, integrated circularity transition of these built environments is key.

The REFLIP research project addresses the need to develop multi- and transdisciplinary methods to realize an integrated circular economy transition of the built environment. It examines how built environment transition processes can become (more) circular as a multidimensional 'wicked' problem. It mobilizes iterative design, life cycle environmental impact assessment, social impact analysis, operations research, and scenario thinking to bridge complementary disciplines and currently largely disconnected data-levels.

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Collective data-based drawings

A common ground for adaptive contributive design

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Abstract

The laboratory ALICE (Atelier de la Conception de l'Espace) at the École Polytechnique Fédérale de Lausanne (EPFL) advances a comprehensive approach to data-based drawing oriented towards architectural and urban co-design processes. This drawing methodology has been key in the contributive design process they have applied over the last seven years, covering a range of scales and contexts, both within the public and private spheres.

Contribution has become a relational strategy that unites a diverse range of participants, each hailing from various backgrounds and carrying unique needs, which come together around the drawing. For this reason, the cultivation of a robust drawing culture, from their teaching to their research and design activities, has become a cornerstone of ALICE's philosophy, where drawing is embraced not merely as a representational tool but as a constructive means for design work. Their methodology has now evolved to include data-based drawing techniques, skillfully merging precise surveying with qualitative data analysis, thereby bridging the gap between quantitative and qualitative facets of design.

This article explains this data-based approach to drawing through a series of projects developed in the Greater Geneva region. Throughout them, they explain how ALICE's situated data-based drawings facilitate intricate coordination among students, leading to real-scale interventions; explore the potential of transforming main roads into landscape infrastructures that promote sustainable mobility and urban development; or offer an innovative lens to comprehend the affective connections between citizens and their urban surroundings, transcending traditional cartographic representations. Finally, these efforts are summarised through the analysis of a single drawing showcased at the 2021 Venice Biennale, illustrating the potential of this methodology to harmonize the collective efforts of various stakeholders.

Keywords

ALICE, urban design, data-based drawing, affective cartography, ecological transition

DOI

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1 Contribution

Philosopher and art historian Georges Didi-Huberman has emphasized the significance of a table as a means to assemble the fragments of the world. The table serves as a shared surface for bringing together the tangible elements of our experiences. When laid out on this surface, the most intimate and concealed connections between these elements become visible, comprehensible, and open to our interpretation and engagement. It is easy to envision the architectural drawing as a situational and technical translation of these surfaces, a realm in time and space where shared interpretations and actions, as well as disagreements, can take place. In this shared space, we come together to shape and project our living spaces, endeavoring to derive meaning from them, from ourselves, and from the environment that unites us.

Since its creation, the ALICE (Atelier de la Conception de l'Espace) laboratory at the École Polytechnique Fédérale de Lausanne (EPFL) has been exploring the possibilities offered by the contributive process and its associated tools, in the pursuit of an alternative architectural practice[1]. This spatial practice is grounded in collective authorship, shared knowledge, and limited resources—a professional orientation equipped to confront the socioecological challenges that challenge our disciplinary history and how we teach architectural practice. The selection of the term "contribution" is influenced by the work of philosopher Bernard Stiegler[2], who, up until his untimely passing in the summer of 2020, delved into the concept of contribution as a means to transcend the typically passive role assigned to citizens in our democracies. He proposed an alternative to the exploitative relationships between the economy, the environment, and knowledge that lie at the heart of our climate emergency.[3]

Over the past seven years, ALICE has embarked on various design research projects through the contributive process, covering a range of scales and contexts, both within the public and private spheres. This journey has included endeavors such as a master plan in the municipality of Bussigny in Switzerland (2017) and the design of public spaces around the Saint Denis train station in Paris (2018). Most notably, since 2015, ALICE has been involved in a series of projects on the EPFL campus, beginning with the redevelopment of Place de Cosanday, the main public space at EPFL, in 2018. Another significant initiative was the "50 years 50 trees" project in 2020, which expanded the square and the surrounding public areas around the Rolex Learning Center. More recently, ALICE collaborated with the Vice Presidency for the Responsible Transformation of EPFL on the Campus Pieton project—a contributive process that coordinated the contributions of students, faculty, research institutes, and authorities for the pedestrianization of the EPFL campus. This effort involved more than 100 different actors and participants in the process (Fig. 1).

Throughout these projects, the concept of "contribution" has evolved into a relational strategy that unites a diverse range of participants, each hailing from various backgrounds and carrying unique needs. These contributors regularly convene at different stages of the design process, adopting a trans-scalar and trans-temporal approach to investigate the territory. A multitude of scales and temporal dimensions intersect

1 We discussed the use of the contributive notion in a previous contribution: ALICE, "Contributive Workshops," STOA 5, University of Naples Federico II - DIARC, 2022, pp. 26-37.

2 As adequately framed by Félix Guattari in his essay "The Three Ecologies" (London and New Brunswick: The Athlone Press, 2000), our current climate emergency cannot be separated from its social dimension. Without acknowledging their interrelated nature, issues of climate injustice are prone to arise as well as climate negationism and political stalemates.

3 Bernard Stiegler, "L'archipel des Vivants. Des territoires laboratoires en archipel pour une politique et une économie des formes de vie." Etica & Politica/Ethics & Politics, XXII, 2020, 2, pp. 157-170.

within the drawings, and through an iterative series of contributive workshops and design synthesis, a set of guidelines or vectors for transforming the site takes shape. Within these drawings, these vectors function as emerging design tools and interfaces, orchestrating spatial production as an ongoing process of material modulation and stewardship. They rely on an analysis of the studied situation, not solely in its current state but as a realm of possibilities replete with diverse inclinations, agencies, and predispositions to be intensified, adjusted, and molded into new urban conditions. This process weaves together various ecologies and timelines, both in the long-term and in projects like Campus Piéton at EPFL (Fig. 2).

In this context, akin to Didi-Huberman's notion of the table, drawing becomes an essential tool in the collective development of ideas. It itself transforms into a common ground and a translation mechanism that bridges the gap between different participants and their areas of expertise. It articulates the inherent ambiguity of the possible and sets in motion the vectors of transformation.

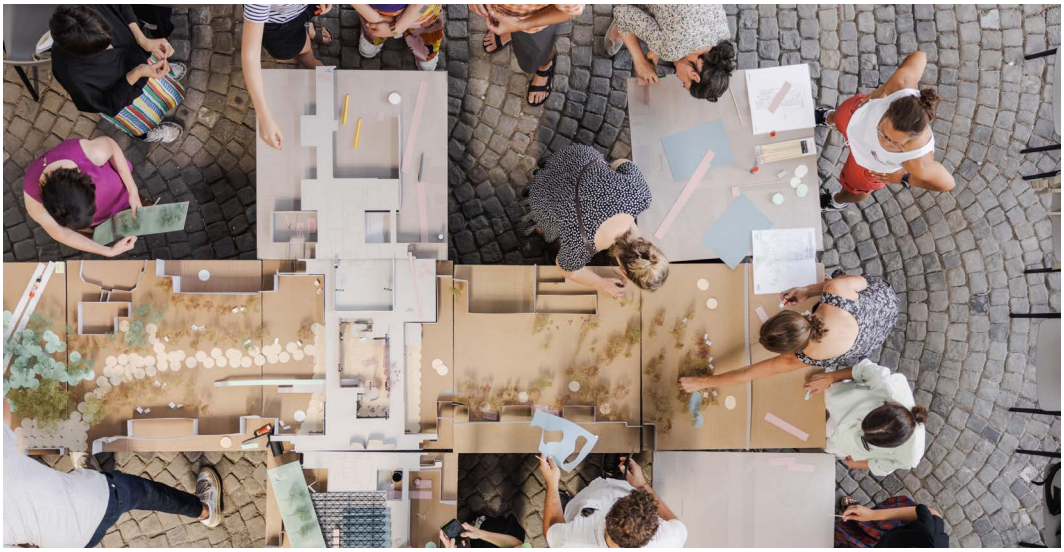


FIGURE 1 Contributive workshop Campus Piéton, EPFL ©Niels Ackermann



FIGURE 2 Contributive workshop Campus Piéton, EPFL ©Niels Ackermann

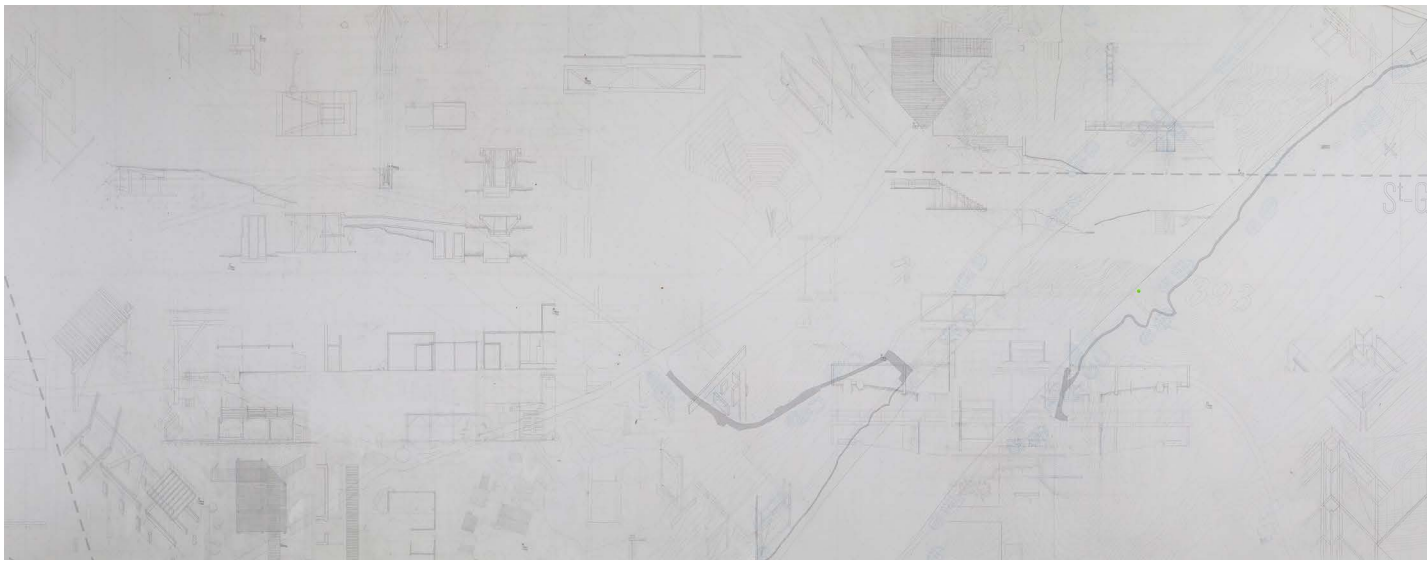


FIGURE 3 Collective hand drawing based on data based cartography of Geneva ©ALICE EPFL

2 A new drawing culture

Expanding the contributive process, ALICE has placed at the core of its research and teaching endeavors the cultivation of a robust drawing culture. As part of this culture, it has encouraged students from the very first year of their architectural education to view drawing not merely as a representational tool but as a constructive one that articulates personal and collaborative design efforts[4]. This drawing culture has evolved over the past 15 years, embracing various formats and media, ranging from traditional hand-drawn techniques to computer-aided methods, all while upholding fundamental principles throughout (such as rigor, the importance of collective work, embodied experience, trans-scalarity, and constructive thinking) (Fig. 3).

More recently, we have developed data-driven drawing methodologies as the latest iteration of our drawing culture. These methodologies involve computational imaging and sensing through the specific use of QGIS, CAD, and 3D modeling software. By applying the same fundamental principles we've cultivated in traditional drawing techniques to the use of these software tools, we have redirected them to not only enhance a quantitative approach to data but also establish a qualitative and embodied connection to it, while benefiting from their efficiency (Fig. 4, 5). This hybrid approach has enabled us to expand object-oriented and location-based forms of graphic representation to incorporate mixed, partially undetermined, and relational orientations. It results in drawings that effectively encompass precise situated quantitative aspects as well as qualitative ones, making the process comprehensible and instrumental in facilitating collective discussions and collaboration with citizens and stakeholders, many of whom lack prior design training.

4 Our understanding of the diagram has a Deleuzian root. The diagram is not a representation or summary of reality but a key device in the production of reality. The diagram helps work and modulate emergent processes, helping articulate territorial potentials into new material organizations.





FIGURE 4 Raw geographical data ©ALICE EPFL

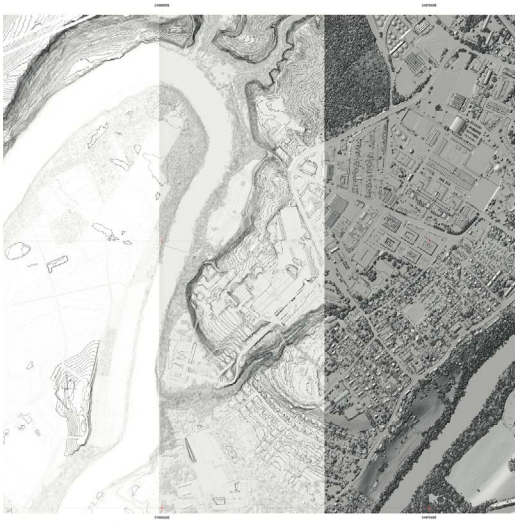


FIGURE 5 Raw data transformed into rasters ©ALICE EPFL

By establishing connections between geographic elements and their potentials through data, Geographic Information Systems (GIS) allow for a meticulous examination of the landscape. This transforms the software into a tool for adaptive design processes, operating simultaneously at territorial and embodied scales. Furthermore, these methodologies possess a dual collective dimension (Fig. 6). On one hand, by collecting vast amounts of data, they aim to allow the multiplicity of the territory to voice its characteristics and possibilities. On the other hand, by exploring the unifying and communicative qualities of spatial drawing, these methodologies empower us to involve the various stakeholders as co-designers. Consequently, this approach recognizes the infrastructural and mediating attributes of architectural drawing, merging analysis and co-design into a collaborative endeavor (Fig. 7).

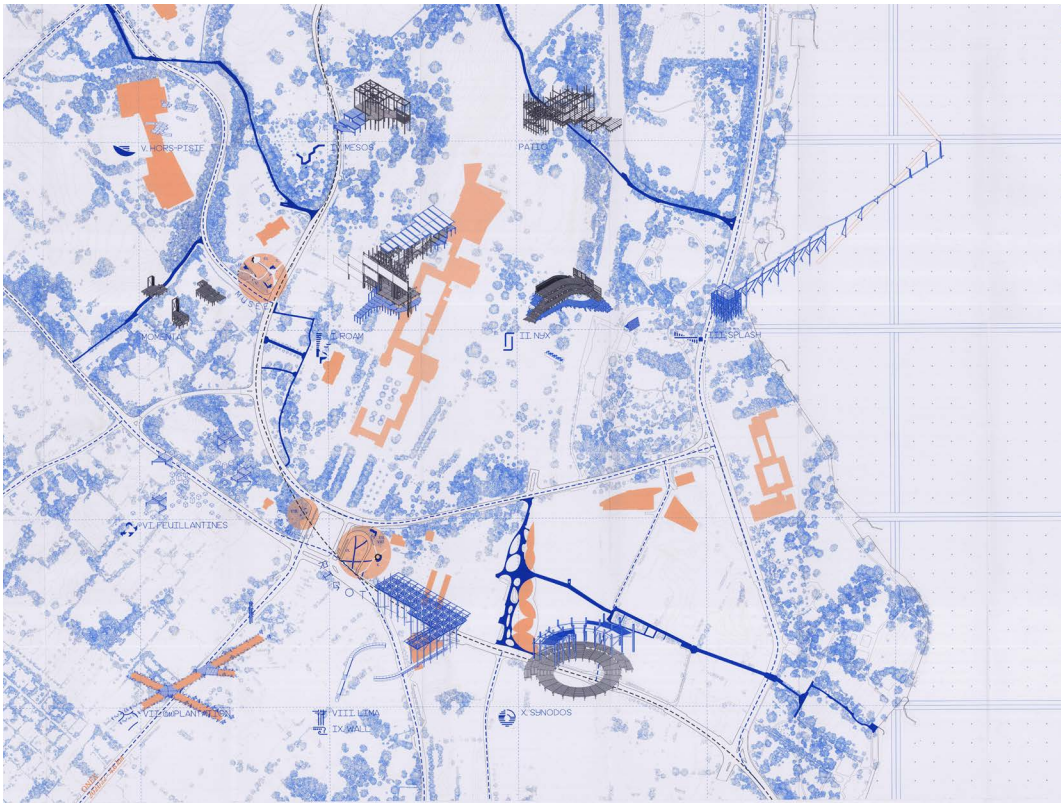


FIGURE 6 Data-based drawing of Geneva shores combined with spatial interventions by students ©ALICE EPFL



FIGURE 7 First year students projecting on collective drawing ©ALICE EPFL

3 The Greater Geneva case

In 2019, ALICE was chosen by the Fondation Braillard as one of seven teams for the "Visions prospectives pour le Grand Genève, Habiter la ville-paysage du 21e siècle"[5] consultation. The ambition was to gather knowledge and develop scenarios for the evolution of the Greater Geneva agglomeration by 2050. ALICE's approach for this project involved using the concept of metabolism to understand the complex interplay of socioecological processes shaping the city. This endeavor combined the contributive approach and data-based drawing, integrating various temporal perspectives and actors to establish vectors and orientations that serve as catalysts for creating new and coherent horizons for the territory (Fig. 8).

In this context, a series of projects unfolded over the past three years, rooted in a foundation of collective data-based drawings that formed the common ground for multimodal landscape infrastructures, 1:1 interventions created by students, and affective cartographies involving local residents, among other initiatives.

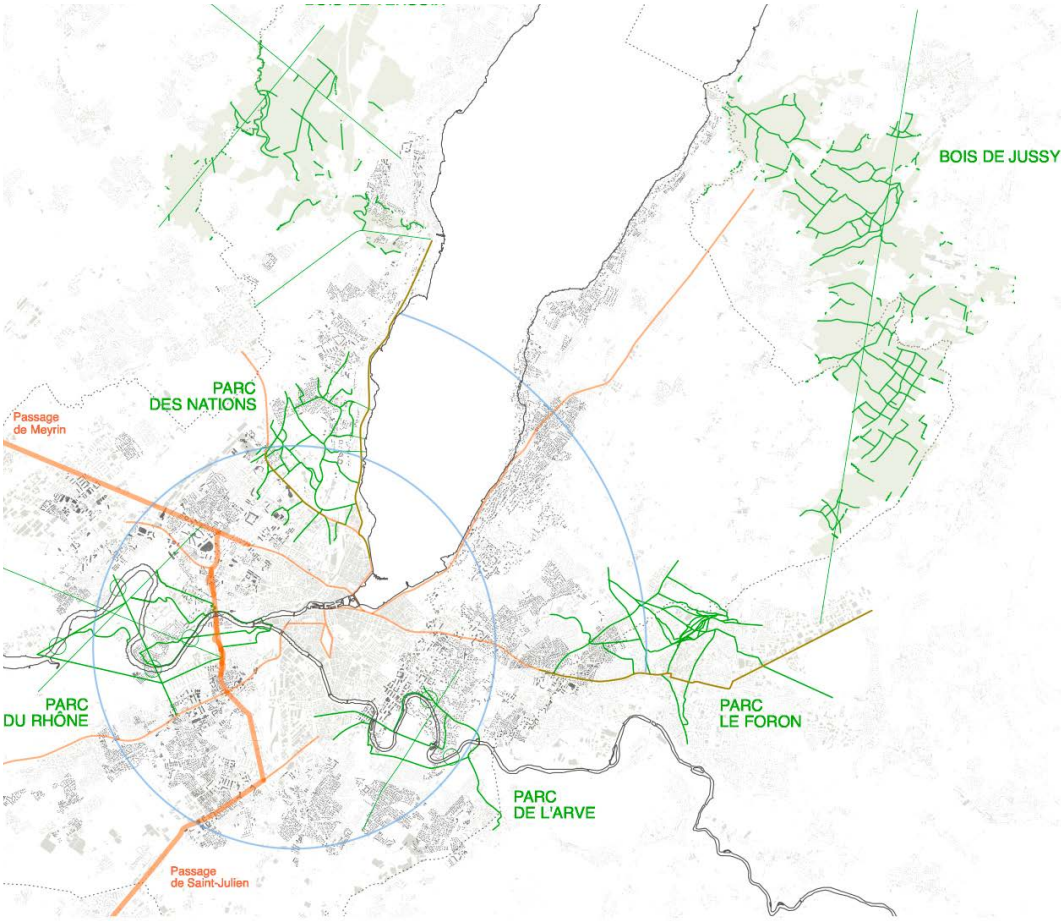


FIGURE 8 Grand Geneve main diagram ©ALICE EPFL

5 Fondation Braillard. https://braillard.ch/activites/presentation-finale/

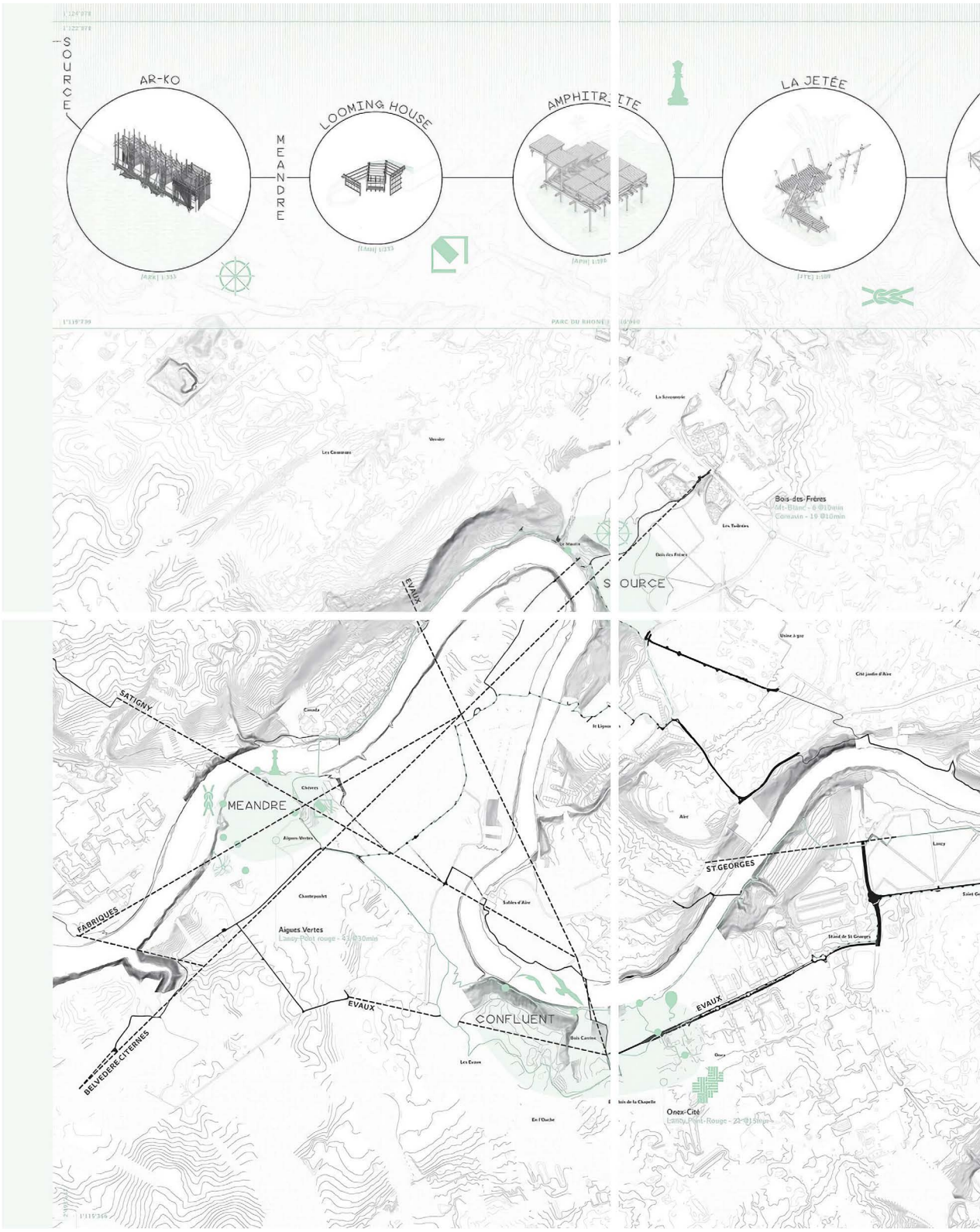
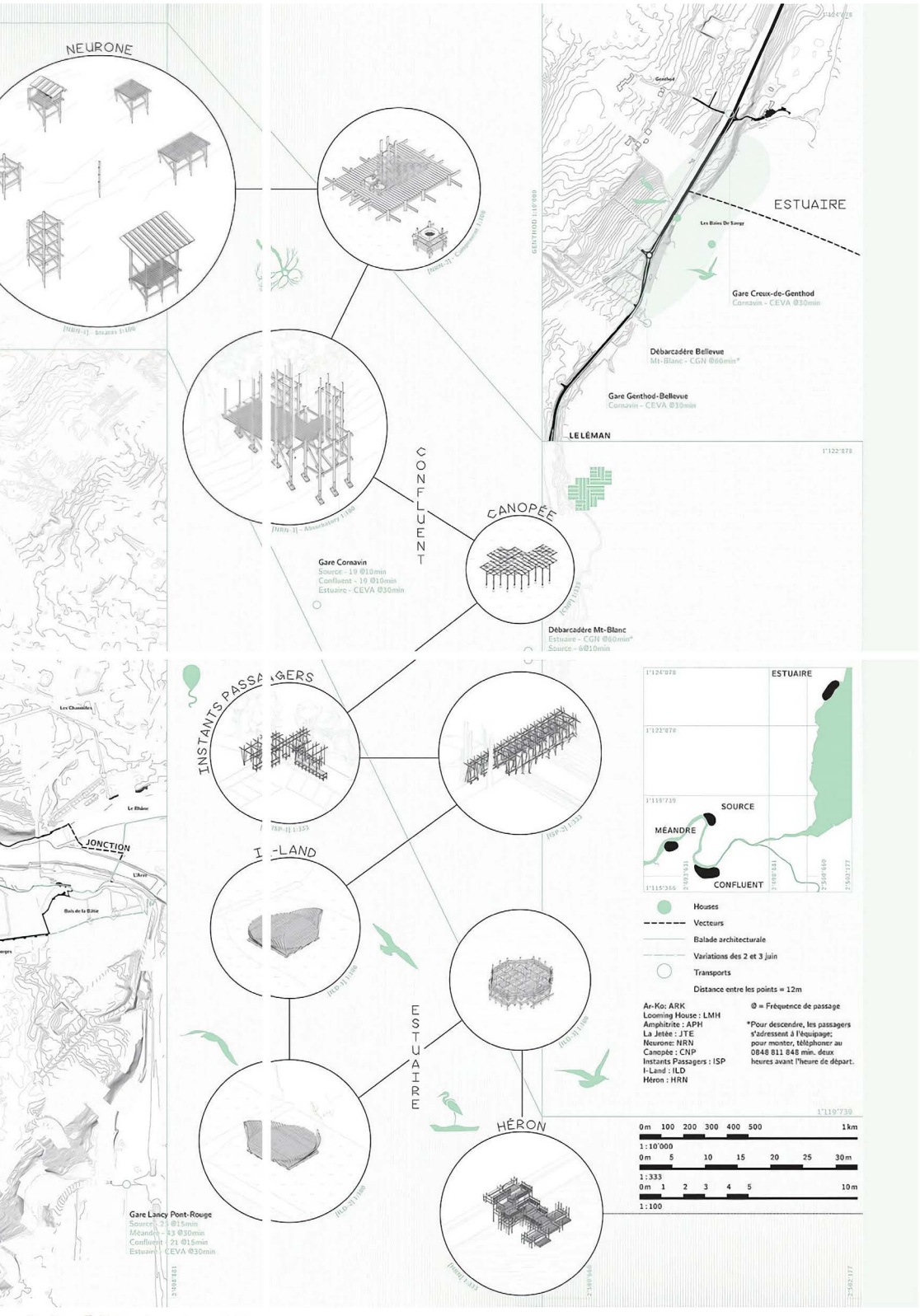


FIGURE 9 Student interventions thorough the Rhone shores ©ALICE EPFL


NEURONE
ESTUAIRE
Gare Creux-de-Genthod
Cornavin - CEVA @30min
Débarcadère Bellevue
Mt-Blanc - CGN @60min*
Gare Genthod-Bellevue
Cornavin - CEVA @30min
LE LÉMAN
CONFLUENT
CANOPÉE
Gare Cornavin
Source - 10 @10min
Confluent - 10 @10min
Estuaire - CEVA @30min
Débarcadère Mt-Blanc
Estuaire - CGN @60min*
Source - 6@10min
INSTANTS PASSAGERS
I-LAND
ESTUAIRE
HÉRON
JONCTION
Gare Lancy Pont-Rouge
ESTUAIRE
SOURCE
MÉANDRE
CONFLUENT
Houses
Vecteurs
Balade architecturale
Variations des 2 et 3 juin
Transports
Distance entre les points = 12m
Ar-Ko: ARK
Looming House : LMH
Amphitrite : APH
La Jetée : JTE
Neurone: NRN
Canopée : CNP
Instants Passagers : ISP
I-Land : ILD
Héron : HRN
Ø = Fréquence de passage
*Pour descendre, les passagers s'adressent à l'équipage; pour monter, téléphoner au 0848 811 848 min. deux heures avant l'heure de départ.
0m 100 200 300 400 500 1km
1:10'000
0m 5 10 15 20 25 30m
1:333
0m 1 2 3 4 5 10m
1:100

On the banks of the Rhône River and its surroundings, ALICE's teaching team and 250 first-year architecture students from EPFL collaborated on creating constellations of 1:1 installations. This transformed the territory into a laboratory where students made individual and collective contributions to redefine the relationship between inhabitants and their natural and built environment. The constellations provided urban strolls to be explored by bike or on foot, with each installation hosting events for small groups throughout the summers. In the 2022 edition, students constructed a constellation on Avenue des Grands-Commun, a significant urban axis on the outskirts of Geneva that extends into the forest, bridging the city and the surrounding wooded areas. These light structures offered new community spaces and programs for residents and visitors to experience and enjoy, including activities like gardening, performances, water-based activities, cooking, and communal meals (Fig. 10). As a pedagogical tool, the situated data-based drawing proved highly effective in coordinating the efforts of hundreds of students across various scales and timeframes. ALICE's team prepared a data-based drawing that combined a precise survey of the context in its different scales with a proto-structure that served as a framework for student work[6]. The projects were then conceived, designed, and constructed in a 1:1 scale, integrating both hand-drawn and CAD-based drawings and considering the embodied relationship to public spaces facilitated by the proto-structure provided by the data-based drawings (Fig. 9).



FIGURE 10 Public space intervention design and built by first year students ©ALICE EPFL

6 For further details on the notion of protostructure, see Agathe Mignon's doctoral thesis "Protostructure, archéologie et hypothèse d'une architecture-support" (EPFL, 2019), Link, and Dieter Dietz, Dario Negueruela del Castillo, Agathe Mignon, and Julien Lafontaine Carboni, "HOUSE 1 Protostructure: Enhancement of Spatial Imagination and Craftsmanship Between the Digital and the Analogical," Digital Wood Design. Innovative Techniques of Representation in Architectural Design, Lecture Notes in Civil Engineering, Volume 24, pp. 1229-1252, Link. From the latter piece, "the protostructure constitutes at once both a material and immaterial support of students' interaction. Its material dimension as a physical construction is invested and complemented by the immateriality of the guiding scheme. Furthermore, the three-dimensional field of the protostructure locates every individual proposition or intervention in relation to the ones from the other participants, vertically and horizontally. It embodies each collective situation in a physical medium. At the same time, a temporal framework locates every action into a broader system. Thereby a set of rules is shared by all actors, enabling them to interact within a gravitational system of structural logic and to operate with similar vocabularies (types of response) in order to construct common knowledge."

Closely linked to the first-year Grands-communs project and using the same data-based drawing as a starting point, the Design Research and Research teams of ALICE, in collaboration with OUVEMA UNIL (Observatoire universitaire du vélo et des mobilités actives from the University of Lausanne), delved into the transformative potential of main roads on the outskirts of Geneva becoming landscape infrastructures. This transformation could lead to a shift toward a sustainable mobility paradigm while enhancing urban qualities in the areas they traverse.

This project, named "Passage-Paysage," focused on three main road axes crossing the Canton and connecting the city center to its hinterland, passing through former villages and industrial infrastructures. Through an innovative blend of survey methods, ranging from multimodal site visits to experimental planning and the data-based drawing methodology, these roads were evaluated with consideration for factors like walkability, environmental qualities, their relationship with the surroundings, and their impact on public health (Fig. 11, 12). Subsequently, a territorial and architectural strategy was defined for each road, with a particular emphasis on nine key sites where the diagnostic showed that landscape intervention at an urban scale would be most needed. In these nine sites, the combination of experimental planning and the data-based drawing methodology facilitated a trans-scalar and transdisciplinary approach, allowing each intervention to be in dialogue with the architectural, urban, and territorial scale of the pre-existing conditions (Fig. 13, 14).

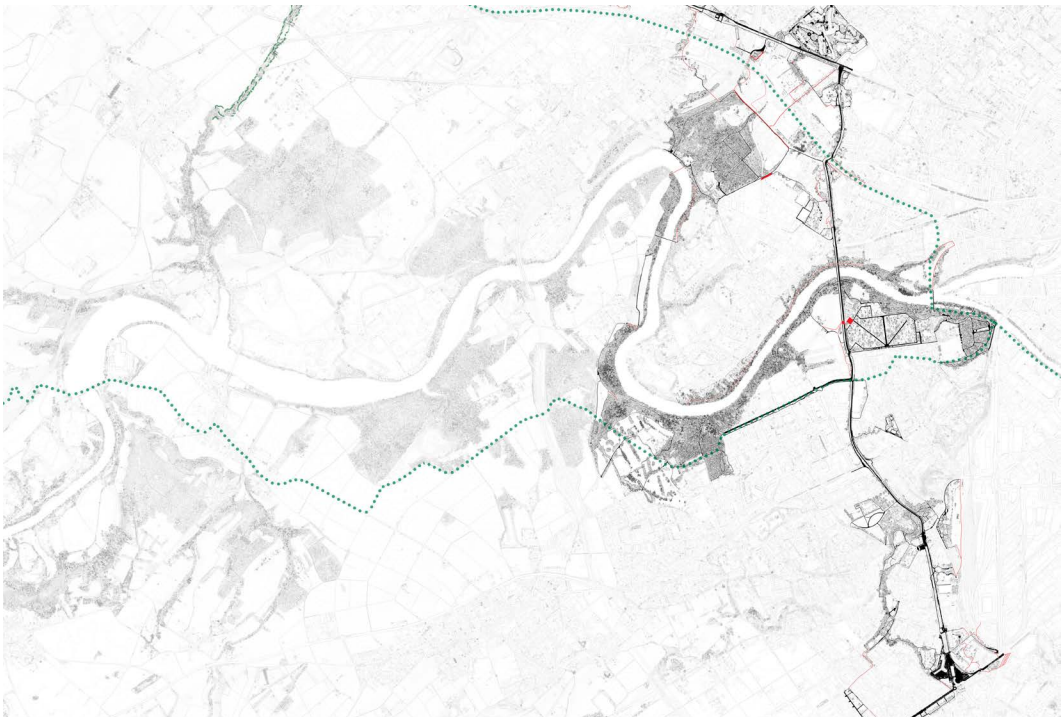


FIGURE 11 Passage paysage project ©ALICE EPFL



FIGURE 12 Territorial section of one of the axis ©ALICE EPFL

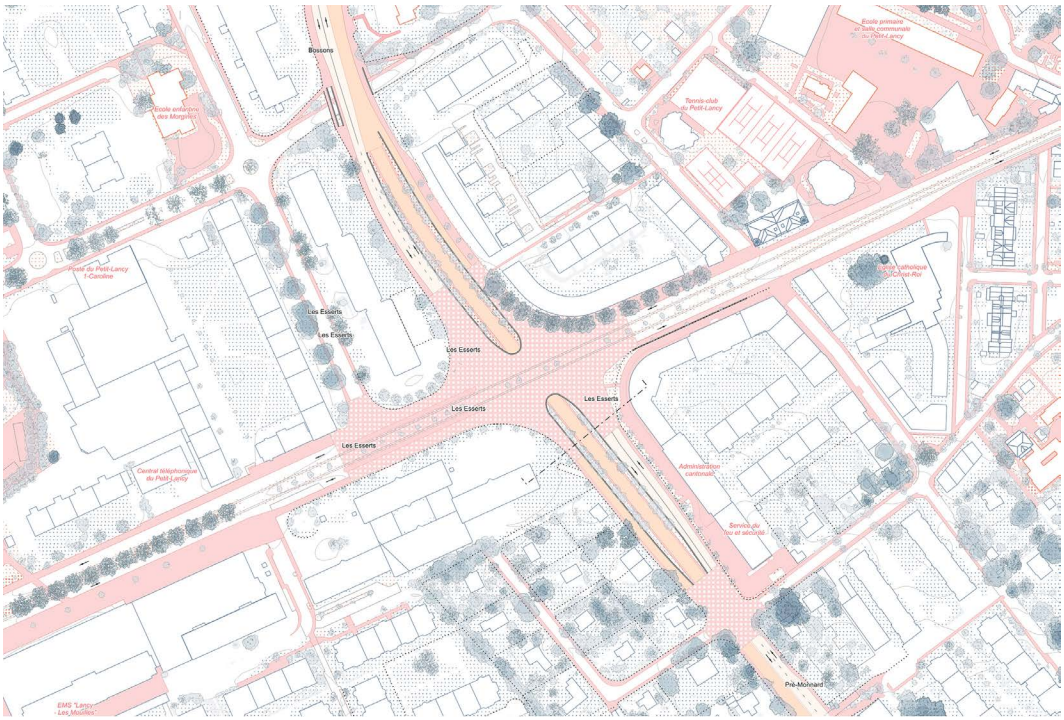


FIGURE 13 Example of road transformation ©ALICE EPFL

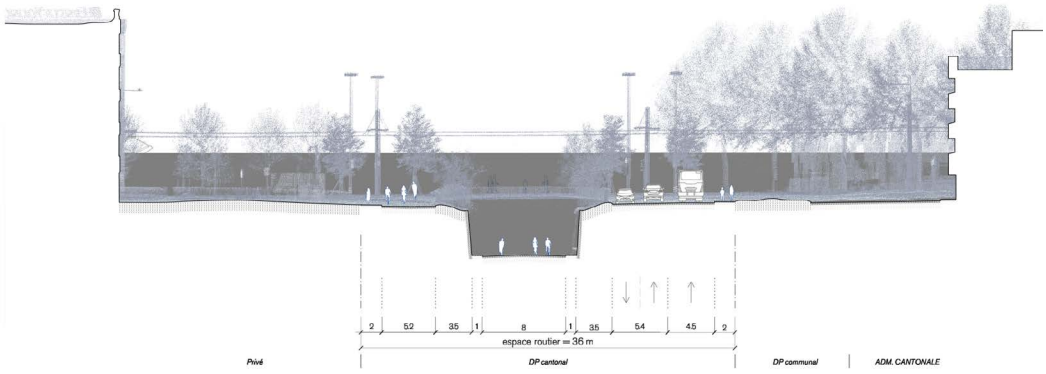


FIGURE 14 Example of road transformation ©ALICE EPFL

The Research team has recently concluded a series of data-based affective cartographies that offer an alternative perspective on the urban space of the commune of Vernier in the northern part of Greater Geneva. The project began with fifteen walk-along interviews conducted with the inhabitants of Vernier[7], which were recorded, transcribed, and geolocated. The transcripts were then analyzed using QDA (Qualitative Data Analysis) software Atlas.ti, resulting in a series of time-stamped snippets classified under various categories related to place attachment. This time-stamped data was then linked to GPS tracks, effectively

7 This project, PLHEBICITE (Planning for healthier and biodiverse cities), was realized thanks to an ENAC Cluster Grant. It was a collaboration between ALICE and the LASIG laboratory at the EPFL. The results of the project can be seen at this link: https://alicelandings.epfl.ch/plhebicite. This digital version of the documentation was made possible thanks to ENAC-EPFL funding and was done in collaboration with its ENAC-IT 4 RESEARCH team.

combining discrete territorial data with qualitative information extracted from conversations and inspired by the surroundings. These maps seek to capture the emotional connections of citizens with their daily environments, highlighting the relationships between the physical environment and memories, perceptions, and experienced landscapes. They offer a means of creating more intricate spatial representations than traditional cartography, particularly concerning the perceived boundaries of the commune. Beyond the administrative demarcation, these boundaries appear diffuse and tied to individual or collective experiences (Fig. 15).

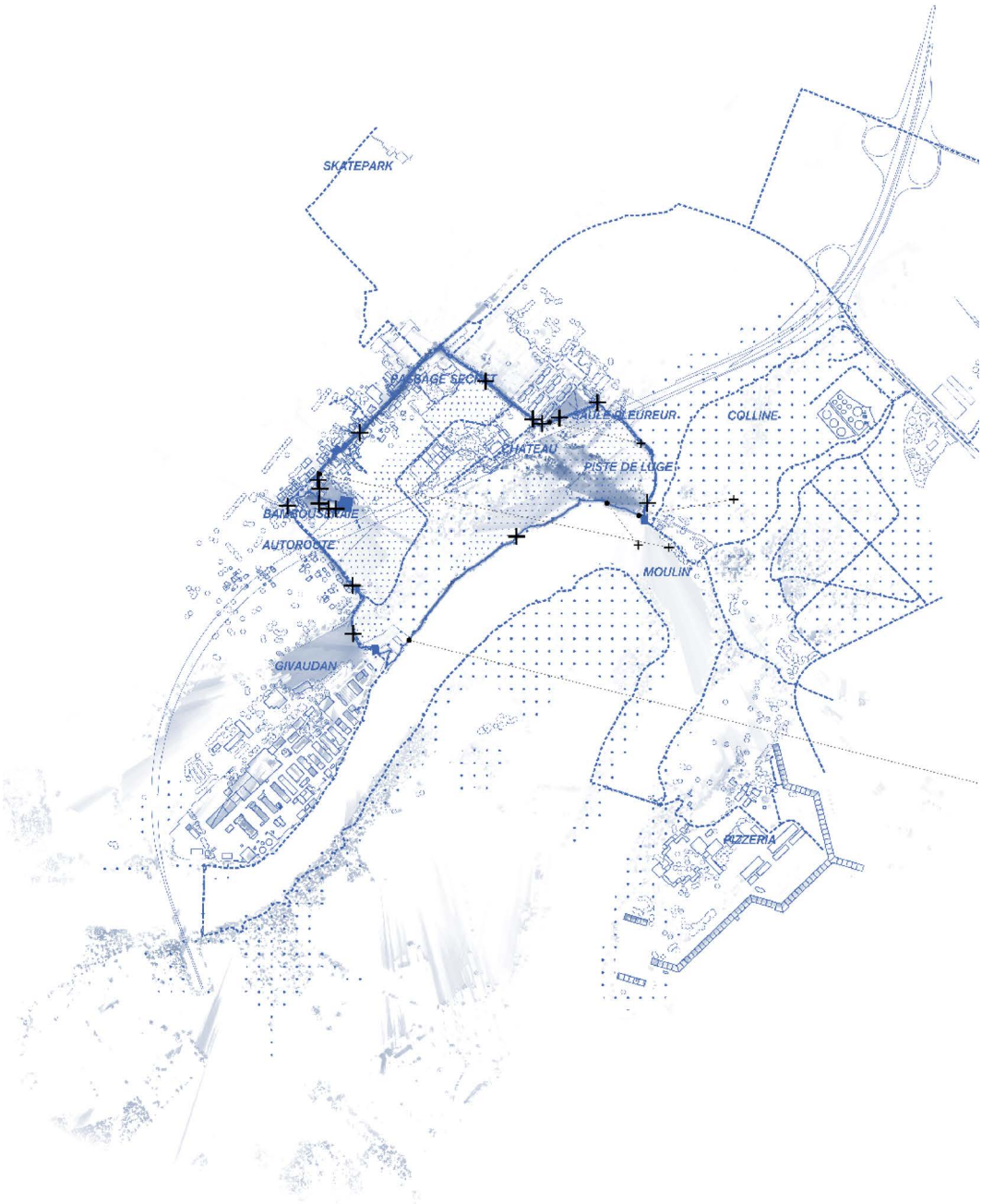


FIGURE 15 Example of interview mapping ©ALICE EPFL

Each interview is mapped, creating figures referred to as constellations of varying scales, which depict the intricate relationship between an inhabitant and a living territory[8]. Some constellations are highly concentrated, while others extend over significant areas, and some form a network of disconnected places, physically distant yet linked by familiar routes (Fig. 16).

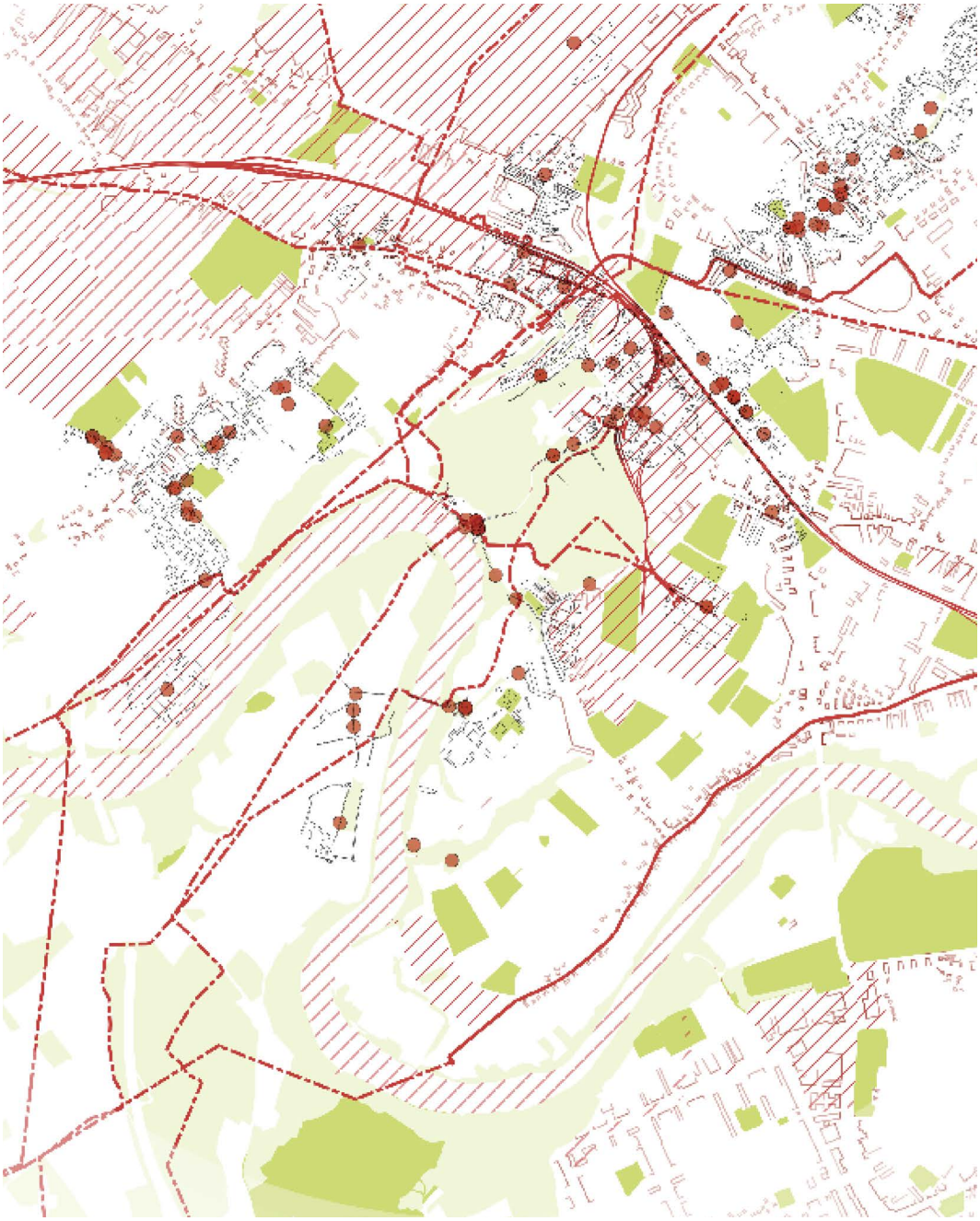


FIGURE 16 Atlas of risk and health ©ALICE EPFL

8 The term comes from Walter Benjamin's work on historical materialism. Against the network, the constellation doesn't think of equivalent nodes but of active materials that react and transform each other, where their uncertain connections offer new insights into the assemblage they form together. These materials are lively, demanding interpretation.

At the intersection of these individual experiences emerges a collective and lived image of the commune (Fig. 17). When superimposed, they create a drawing that reveals the lines of force and intensity within the commune, unveiling the most significant shared areas, zones that may appear empty, and connections with other territories.

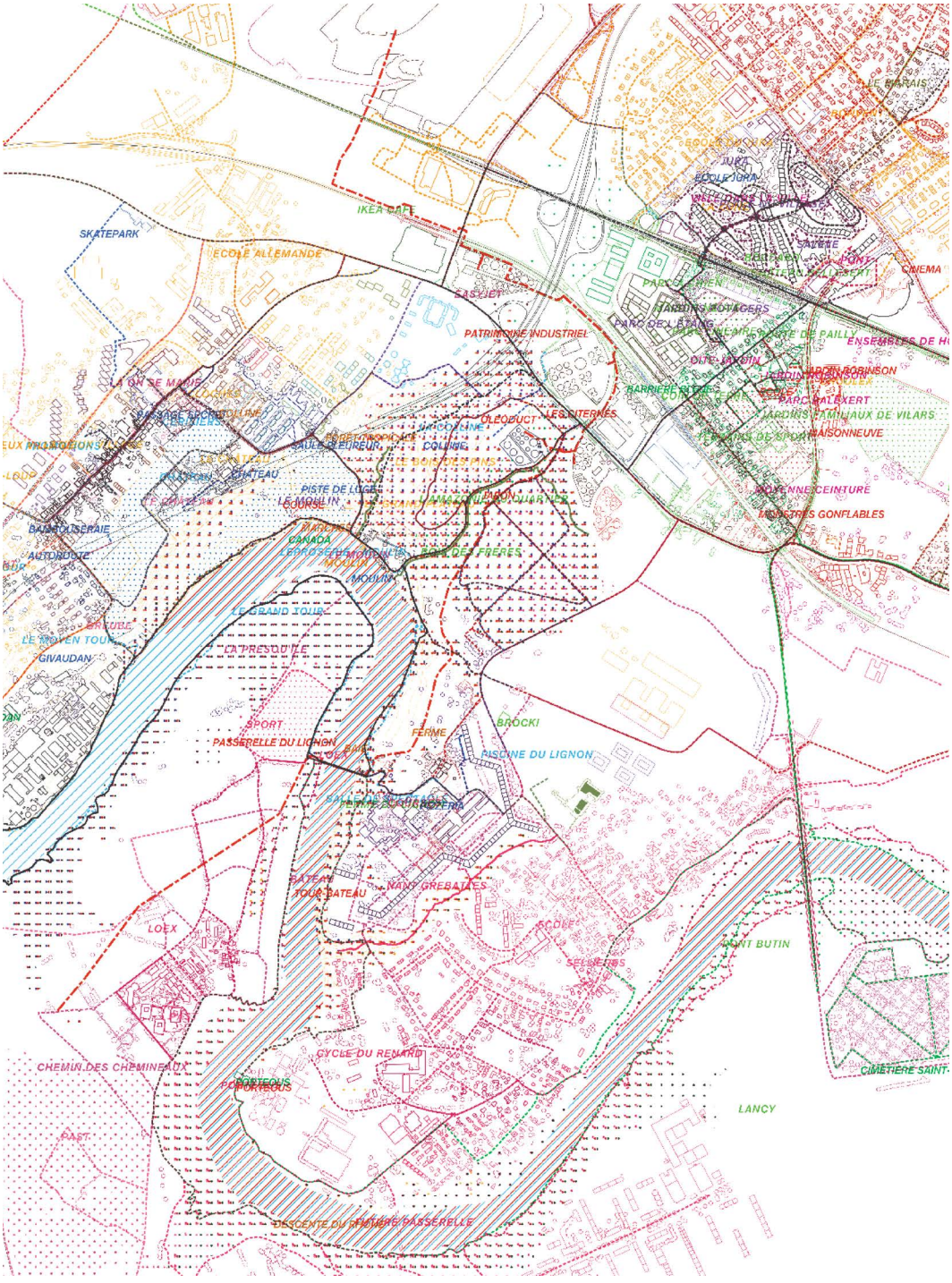


FIGURE 17 Superimposed interviews ©ALICE EPFL

4 Perspectives

The culmination of these pedagogic, design research, and research processes was encapsulated in a single drawing, which was exhibited in the Italian Pavilion of the 2021 Venice Biennale. This drawing represented the collective contributions of students, professors, researchers, citizens, authorities, and many others. It showcased the potential of the methodology as a tool for orchestrating the efforts of multiple entities, disciplines, and visions (Fig. 18).

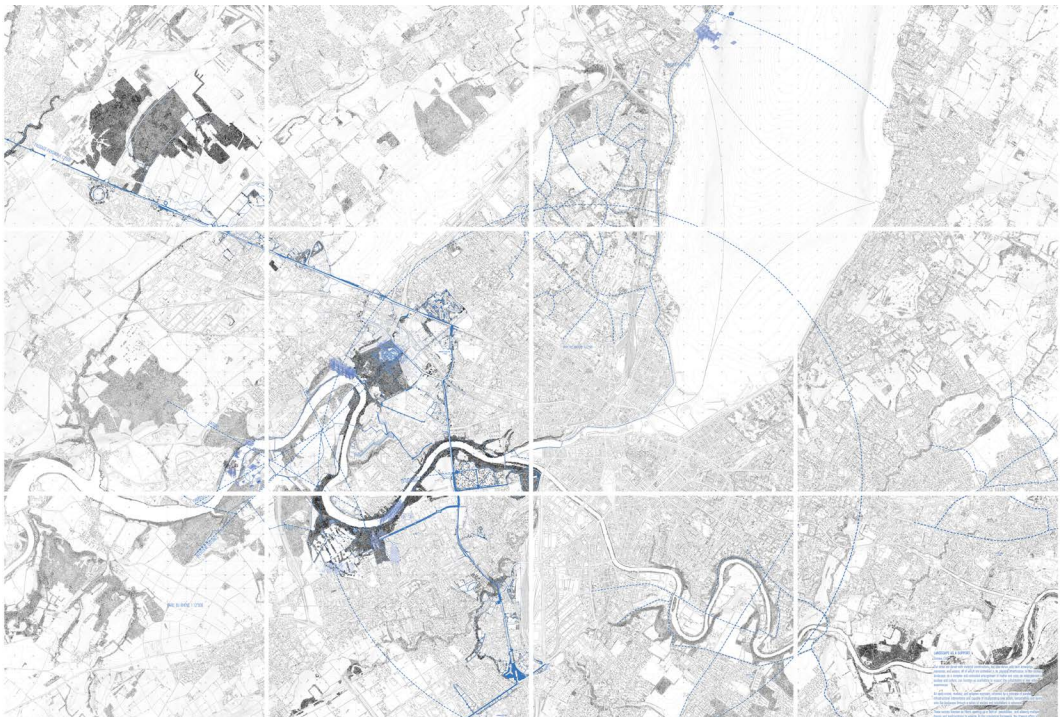


FIGURE 18 Landscape as a support (Collective drawing showing ALICE's interventions in Geneva)

The common ground, created through the collective data-based drawing and the contributive approach, enables the collective authorship needed to navigate the complex processes shaping the city. It serves as a fertile ground for embracing a wide array of voices. This shared and dynamic canvas ensures spatial coherence across different projects while maintaining the necessary flexibility for inclusive and participatory development over time. However, it's essential to acknowledge the challenges associated with this methodology and its tools. On one hand, the involvement of numerous actors in the contributive processes necessitates a commitment from governance structures to support these processes. Unfortunately, this commitment is not always guaranteed, and it has posed obstacles in various projects, jeopardizing the realization of collective work involving citizens, students, and researchers. Furthermore, despite the increasing availability of GIS data worldwide, it's crucial to recognize that the Canton of Geneva in Switzerland has invested significant resources in conducting a precise survey of the built environment using GIS technology[9]. The amount of data available in the canton surpasses that available in other Swiss cantons, not to mention in other regions around the world.

9 SITG (Système d'Information du Territoire à Genève). https://ge.ch/sitg/

Despite these challenges, it's paramount to advocate for collective situated processes that view the city as an evolving web of relationships, entities, social structures, cultural movements, and historical, biological, and geological trajectories. The movements interconnecting these dynamics are often invisible, intangible, and immeasurable but remain active and impactful. Visualizing them, not as raw data or graphical representations, but as embodied spatial entities, is critical when confronting the complex issues facing regions like Greater Geneva, transcending the boundaries of a single project or profession.

The various forms of interventions undertaken by ALICE have fostered the emergence of an open, productive, and affective continuum without imposing the constraints of a single system. This approach has been recognized and supported by the Geneva authorities, promoting a much-needed change and fostering innovation in how we define the canton's built environment within the context of the ecological transition[10] (Fig. 19).



FIGURE 19 Tracing a vector onto the Rhone river by first year students ©VictorMaréchal

10 Onex Micro-territoires. https://www.ge.ch/dossier/concertation/demarches-terminees/onex-micro-territoires-experimentons-espace-urbain
Table Ronde Laboratoire ALICE EPFL. https://www.ma-ge.ch/evenement/table-ronde-laboratoire-alice-epfl/

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Retrieving landscape

Drawing(s) as key to the development of alternative biographical readings of Nanhai in the Pearl River Delta

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Abstract

This article focuses on two methods employed in the selection, interpretation, and representation of diverse source materials for developing alternative biographies for my ancestral landscape - Nanhai district in the Pearl River Delta in southern China. These biographies aim to approach Nanhai from a long view of continual transformation, as opposed to prevalent readings of the region that focus on the striking spatial contrasts and large-scale developments that have only come about in recent decades.
The chronological reading explores a critical shift in the cosmological understanding of the landscape situated in the 19th century through a selection of historical gazetteer maps, while in the excavational reading the diffuse continuity of the lineage in the present-day landscape of Nanhai is traced. In both methods, the drawing functions as a crucial (research) tool to engage the range of source materials.

Keywords

Pearl River Delta, Landscape Biography, Ancestral Landscape, Cosmological Landscape, Operative Research

DOI

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1 Alternative slow readings for a fast changing region

As the largest urban area in East Asia, having overtaken Tokyo sometime in the 2000s (The World Bank, 2015, pp. 21–22, 25), the Pearl River Delta is often imagined solely through its urbanizing machinery, which inevitably replaces the old with the shiny new. Since the initiation of economic and political reforms in 1978, the delta has indeed rapidly urbanized into one large sprawling region. Exemplary studies through this lens include the short contribution to the *Mutations* publication and the subsequent *Great Leap Forward* in the *Project on the City* series by architect Rem Koolhaas and his student team at the Harvard Design School, which have set the tone in terms of framing the Pearl River Delta (Chang et al., 2000, 2001). Written as provocations on what was then the 'emerging urban condition(s)' of the delta, the so-called 'city of exacerbated difference,' the focus lay on the spectacular and the high-speed, covering the short period in which the delta emerged 'with the suddenness of a comet' (Koolhaas, 2001, p. 28).

However, beyond the spectacular, people also make their homes here, and long-lingering, diffuse continuities that are not immediately legible persist despite modernization, in contrast to the suggestion that the delta only recently came into being. Thus, maintaining narratives that privilege (urban) development and the short-term, disorderly transformations of the region as the dominant lens of inquiry risks obscuring and homogenizing what is, in fact, a multi-layered and multi-temporal 'lifeworld.'[1] Instead, I propose 'slow readings,' firmly grounded in the perspective of landscape, to retrieve landscape. These are 'views from somewhere' (Haraway, 1988, p. 590), shaped by my personal connection to the delta and specifically Nanhai district – the ancestral home of my paternal family – but equally by my distance from it, as I was born and raised in Belgium, where I also received my architectural training. My specific personal and disciplinary position played a crucial role in shaping my research lens, in directing evidence gathering, and in developing and applying relevant methods. These readings thus form 'partial,' yet 'faithful accounts of the world' (Haraway, 1988, p. 579), from both up close and afar. They attempt to engage the longue durée instead of the sudden, and the everyday as opposed to the striking.

2 Two complementary methods as variations of landscape biography

The biographical approach to landscape, as extended by the Dutch archaeologist Jan Kolen and colleagues (Kolen, Renes, et al., 2015; Kolen, Ronnes, et al., 2015), offers a framework within which to develop my slow readings. The Dutch approach to landscape biography takes as its key concerns the acknowledgment of landscape as constantly changing at different tempos (in different rhythms, layers, and memories), set against the longue durée; the mutual influence of people and landscape as a lifeworld (their intertwined biographies); and the landscape as multi-layered with spatial inheritances that are continually reworked by people and other actors (the authors of the landscape), thus also avoiding the sharp distinction between

1 Lifeworld refers to landscape "as a world to live in" as opposed to "a scene to view." (Wylie, 2007, p. 149) Put simply, it is the world in which human and non-human life unfolds.

nature and culture. Findings, in turn, offer insights that can serve landscape planning and design, thus bridging the gap between research and practice.

Similarly, I aim to place Nanhai within a longer process of continual transformation by approaching the question of temporality through what I call the 'time depth' of the landscape: quite simply, the presence and weight of time. Two methods applied to the same case of Nanhai illustrate distinct yet related methods, each addressing the interplay between rupture, change, and continuity in the landscape in the long term in a different way.

In the first method, Nanhai as officially represented in historical maps is traced for the 19th century, during which China shifted towards modernity, a pivotal period in which the 'homogenization of space' (Yee, 1992, p. 31) at the expense of landscape starts to take hold: a 'chronological reading' of the cosmological landscape through Nanhai.

In the second method, Nanhai is approached as an ancestral landscape 'pregnant with the past' (Ingold, 1993, p. 153) resilient in the face of modernization. It starts from the careful mapping and visualizing of the present-day landscape as replete with traces of the past, left by the hands of many previous dwellers by simply spending their lives within it: what I term an 'excavational reading' of the ancestral landscape of Nanhai.

In both approaches, the drawing kit of the architect functions as crucial component to engage the source materials: both the everyday practice of reading spatiality, uses, and patterns from two-dimensional visual documents, and the skills to likewise read, interpret, and document the (built) environment. Drawings thus form the key to capturing – as a research tool – and presenting the landscape and its biographies. In fact, both methods are forms of mapping of the lifeworld of Nanhai. The source materials are subjected to a series of operations, to get closer to or create distance from them. One method starts from limited documents at hand which are unpacked and expanded, while the other starts from a complex, multi-layered environment ending with precise drawings in which choices on what to abstract or elaborate are made deliberately. Inherently, these processes that center the drawing as an instrument of inquiry are partial, based on implicit assumptions and automatisms that are further explored below in two series of reflections.

3 Creating proximity with the digitized gazetteer: the chronological reading of Nanhai's cosmological landscape

In this chronological reading of Nanhai, a shift in the official representation of the cosmological landscape is traced for the 19th century, a period Chinese literary historian and public intellectual Wang Hui insists on revisiting (2011). During this time, pressured by foreign expansionism, China started undergoing a profound cosmological shift[2]. A sense of urgency developed among the reform-minded to save the Chinese empire from outside threats through the measured and tentative incorporation of Western knowledge under different guises, carefully balanced with the preservation of an own perceived Chinese essence[3]. Ultimately, the fall of the last dynasty in 1911 marked the start of the (complete) disintegration of a more or less coherent enmeshment of state and a cosmological, religious, and everyday lifeworld. During this extended period, the official Chinese landscape started to gradually move from an animated, enchanted landscape to a quantifiable, rational territory.

Two 19th-century editions of the Nanhai gazetteer[4] offer a concretization of this shift, localized glimpses into this transitional, exploratory phase[5]. Both contain a large number of *tu* 圖 – although commonly translated as image, illustration, diagram, chart, or (technical) drawing, *tu* remains an untranslatable, ambiguous word (Bray, 2007, p. 3) – which in the case of these gazetteers, I will interpret as maps. Though made by a specific group of people, and thus not neutral, I choose not to approach them through the lens of power, but to read them as reflections of the landscape as perceived and idealized by their makers – local officials and scholars – to fit within the larger framework of the empire. The texts in the respective gazetteers – extended table of content, introduction, and epilogue – act as reading keys to the maps, while I also build upon the seminal work on Chinese cartography by Cordell D.K. Yee (1994b, 2008).

Below, two 'montages' that combine selected maps from both gazetteers illustrate the method – an iteration of what was first explored in the context of a symposium (Chan, 2022). Comparable maps from both editions are selected and literally put next to each other on the same page, allowing a sharper focus for reading and comparing the precise contents, style, and authors, while also uncovering the probing nature of 'new' or 'Western' cartographic practices for the official landscape as opposed to a sudden break. The gazetteers are drawn from digital collections, and thus dematerialized, which forms a defining condition for this method that will be addressed later on.

2 Cosmology is interpreted here as Bruno Latour did in his contribution in the newspaper The Guardian, where he observes the necessary shift away from 'infinite space' and unbridled expansion is 'of the same magnitude as when, from the 17th century onward, westerners had to shift from the closed cosmos of the past to the infinite space of the modern period.' (Latour, 2021)

3 For more information on the Self-Strengthening Movement (1861-1894), see Bastid-Bruguière (2009).

4 The local gazetteer was a genre of history compiled by officials and local scholars, typically offering an overview of the land (textually and visually), its inhabitants, and its government in multiple volumes (juan). It formed a key instrument for local governance. Their periodic recompiling and their adherence – especially in the Qing dynasty (1644-1911) – to a more or less uniform template in style and contents, allow for a systematic comparison of the same subjects between different editions. (Zurndorfer, 1995, p. 189)

5 Note that 'modern' cartography was introduced by Jesuits much earlier at the imperial court. However, these practices were not widely accepted nor implemented by Chinese literati on the ground (Yee, 1994c).

3.1 Montages

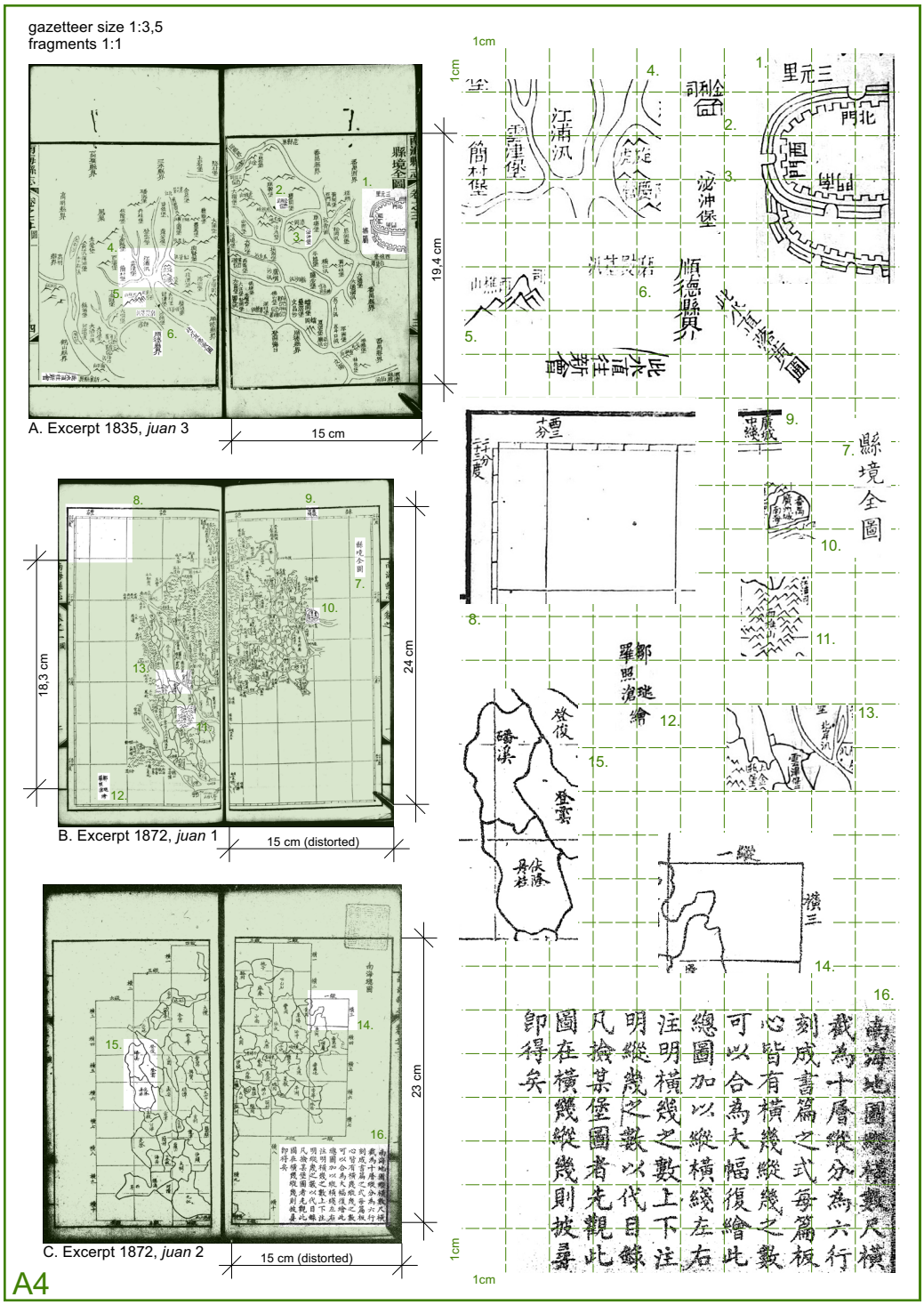


FIGURE 1 A comparison of county maps *Reproductions from the Nanhai gazetteers 1835, 1872 (Harvard-Yenching Library)*

In the first montage, three maps representing Nanhai county from both gazetteers are combined on an A4 sheet. On the left side, the maps are scaled down, reproduced in full, and overlain with a transparent color, while highlighted details are left white. These details, as cut-outs, are shown on the right side on a grid of 1 cm by 1 cm. They are reproduced onto the grid in their actual size as in the original gazetteer volumes. The purpose of the montage is to make tangible again the dematerialized gazetteer (as a reproduction), specifically for aspects that are important to the measuring eye of the architect: actual line weights, line types, text size, direction, … At the same time, it functions as a communication device: by singling out details, it leads the reader into the world of the map while taking into account the constraints of publication: the impossibility of reproducing spreads in full. On the other hand, the necessary activity of selecting and interpreting specific details from the maps is deliberate and requires a degree of precision. From this process of composing the montage, several themes start to emerge that also move beyond the superficial reading of a mere inclusion of Western conventions such as the use of a graticule (9, 10).

On the one hand, the selected details highlight obvious graphical changes: from a largely pictorial approach (1, 2, 5) to precise planimetric representation (10). However, there is also retention: Nanhai is still presented without its neighboring localities, as well as pictorial mountain peaks (11). On the other hand, epistemic changes slowly creep in: firstly, where in the earlier edition the map contributors are unclear, and the table of contents indicates each subcounty map (*bu* 堡) map was supplied by the *bu* itself, the newer gazetteer maps – some signed (12) – are the work of a defined team of mapmakers (12), which we could even start to read as authors. Secondly, we can read the gradual shift from the precedence of text over image to the image gaining autonomy over the textual. Whereas the older map A relies on descriptions outside the map set for factual information such as approximate distances between the county seat (1) and the different *bu*, the text (16) in the bottom right corner of the 1872 map C explains the introduction of a grid system consisting of verticals and horizontals, which makes possible the swift retrieval of maps within the gazetteer, and explicitly states it thus replaces the table of contents as the primary navigational aid. Thirdly, in the newer edition, the careful probing and development of conventions can be seen. Where before, the use of variable scale, perspective, and pictorial representations were considered "proper to cartography" (Yee, 1994a, p. 152) and their use often hinged on textual accompaniment, in the late Qing dynasty, the map starts to move towards the form of a stand-alone document. Thus, undoubtedly, convention and standards would need development for maps to function by itself.

The second montage – using the same arrangement – focuses on the depictions of Guangzhou, the provincial capital as well as the county seat of both Nanhai and Panyu county. Unsurprisingly, due to its status, in both gazetteers, more detail was reserved for these maps in comparison with the *bu* maps that are of similar scale – especially evident in the case of the older edition. I propose that undoubtedly very conscious choices were made on what elements to include or exclude to render a legible and specific portrait of the city as afforded by the limited book size (approximately 28 cm by 15 cm, excluding the center margin stitched into the book binding).

The 1835 map again shows an idealized form of Guangzhou, which was common also in manuscript maps (Yee, 1994a, pp. 154, 164), symmetrically composed and ideally sited in relation to the Pearl River. The city walls and their gates are pictorially represented (5.), as are the multitude of temples, the mosque, government institutions, and academies inside and outside the city walls (2.). Curiously, no distinction is made between temples of different religious backgrounds or government buildings – all sharing the same symbol (2, 4.). The walled city is pictured much larger, indicating its symbolic importance, in relation to the extramural areas in the 1835 map (compare 1. with 8., both covering the same area). In contrast, in the 1872 edition, the proportions are now faithful to reality. As in the county maps, a graticule is used, with the prime meridian (7.) running through the imaginary division between Nanhai and Panyu (13.), and hierarchies are expressed through different line types and weights. However, the content remains much the same: although the number of landmarks is reduced, religious and government buildings (compare 11. with 4.) form the main

points for orientation within the city. Although they differ technically, their purpose remains the same: to show a portrait of a city where the religious, scholarly, and governmental are enmeshed.

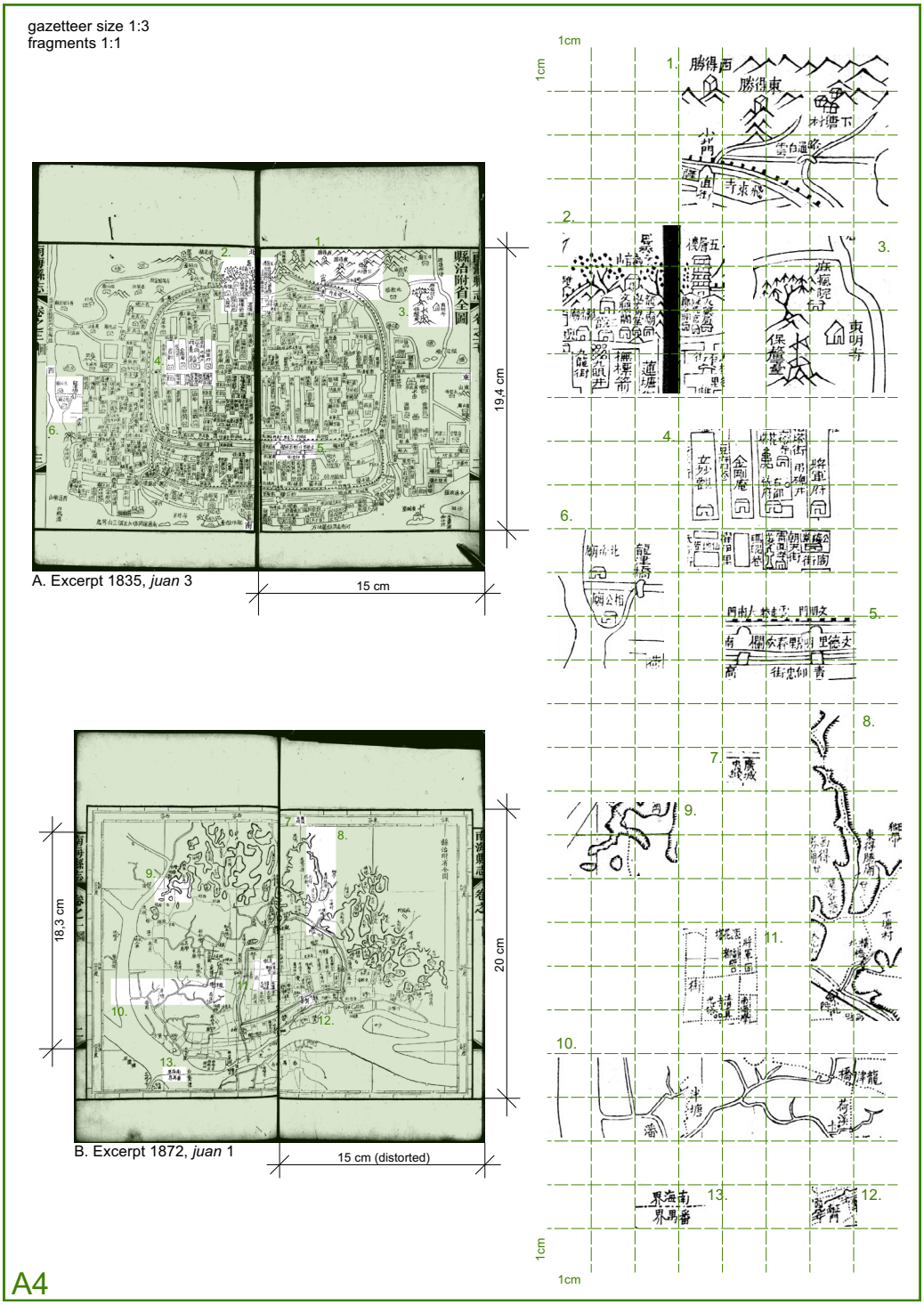


FIGURE 2 A comparison of maps of the county and provincial seat *Reproductions from the Nanhai gazetteers 1835, 1872 (Harvard-Yenching Library)*

3.2 Reflections – bringing closer the past landscape as architect

3.2.1 Engaging the local gazetteer, an oft-cited source

Local gazetteers form an important source for historians of China, as an estimated 8000 have survived, offering insight into localities for the past millennium (Wilkinson, 2000, p. 154). Their extensive contents allow for research from multiple angles – ranging from demographics to local customs and dialects. However, their visual content has been understudied in favor of the textual, which has only been taken up in recent years (Luo, 2016). On the other hand, gazetteers should also be heeded for their 'local patriotism' as the team of compilers included local scholars who would have wanted to paint their own locality in a positive light (Will, 1992, pp. 12–13; Zurndorfer, 1995, p. 190). Taking up both points, I center the visual and read the *tu* with sincerity, as both reflections of a desired landscape and as self-representations. Furthermore, making large sets of illustrations – in the case of the 1835, 84 *tu*, and the 1872, 164 *tu* – must have been a time-consuming endeavor and thus their inclusion points to their relevance.

Working forcibly at a distance from Belgium due to the pandemic, the gazetteers were accessed through online databases. Holdings of different copies worldwide have become accessible through many digitization projects, offering the possibility to work remotely. Even within China, due to the originals' fragility, oftentimes reproductions are consulted instead[6]. Unfortunately, this also dematerializes the sources: its paper, its binding, but more pertinent to this method, its size – working online one can zoom in and out at one's convenience without regard for scale. Compiled versions also combine multiple spreads on one page, foregoing the actual size of the original. An important step, then, in engaging the material consisted in attempting to materialize again this unrooted archive through comparing different digital copies of the same edition. Using the ubiquitous drawing applications available to designers, the *tu* were then scaled back to the original book sizes and printed, allowing me to start my own paper archive nonetheless. Only then does it become possible to appreciate the delicate work of the gazetteer, printed with woodblocks, and to imagine the constraints and affordances of this particular medium. Keeping in mind that the negative (the white space on each page) was carved away, suddenly the thickness, or rather thinness, of a line acquires a certain weight. For the second edition, it becomes clear that the medium was pushed to the limit, as evident from the very fine work.

3.2.2 Tracing conventions

In the 1835 edition the content of the *tu* is oftentimes limited (and diverse as each *bu* provided its own map), with no visual key. Likewise, the 1872 gazetteer maps offer no legend for interpretation. However there is the instinctive ease – formed through habits of architectural training, practice and research – to read the images immediately as spatial representations, which is not without danger when looking at images so remote in time. As such, there is a need to also render strange the habitual, and instead of glossing over what is not immediately understood to zoom in on visual discrepancies, differences, the clues that absences and presences present.

6 See for example the 260 volume Guangdong *Lidai Fangzhi Jicheng*廣東歷代方志集成 [Guangdong Gazetteers of the Past Dynasties Collection], with reproductions of extant gazetteers of Guangdong Province.

The idea of the convention allows for a reconciliation of both remoteness and familiarity. At its most basic level, conventions are simply implicit in the everyday use – a door in a floor plan needs no explanation nor legend. In the case of the gazetteers, then, the absence of a legend implies it was simply unnecessary, the use of gazetteer maps either hinged on unspoken conventions or separate descriptions included in the gazetteer elsewhere. What is present then can be approached from this assumption, allowing for the often limited or abstract documents at hand to be unpacked and expanded.

3.2.3 Redrawing as access to a past landscape

Finally, an obscured step that engages time depth is the redrawing of maps as a method to become familiar with this landscape of the past, a form of closer engagement with the material. By following contours, pinpointing villages, reading place names, the retracing acts not unlike a survey on-site, in which themes, patterns, repetitions, start to emerge. These redrawn maps (if georeferenced) in turn can be compared with other layers of satellite imagery, aerial footage, and contemporary maps – bringing together a wide array of sources straddling almost two centuries in time. The retracing and overlaying thus allow the compilation of an archive of diverse yet comparable documents, stacked on top of each other from which traces that remain today can be detected and offer clues to themes to investigate in the second, excavational method. Likewise, this survey of paper landscapes, in turn, points to moments on the map that can be shown to the reader.

4 Doing fieldwork in memory and amidst traces: the excavational reading of an ancestral landscape in Nanhai

As opposed to the previous method, this approach starts from the contemporary situation, working its way downward: scratching at layers and tracing continuities in the landscape as 'an enduring record of – and testimony to – the lives and works of the past generations who have dwelt within it, and in so doing, have left there something of themselves' (Ingold, 1993, p. 152). From this point of view, the landscape is not shaped by clear-cut authors but rather reworked again and again by a multitude of users over time, their traces coexisting as simultaneous elements. This reworking operates not only on the physical level but also through the repetition of rituals and stories. The latter form the keys to the 'cultural biography' of the landscape according to the Dutch historian Gerard Rooijakkers (1999, p. 302).

The case of my ancestral village in Nanhai, as explored in a forthcoming essay, is used to illustrate the developed method (Chan, in press). The diffuse continuity of the lineage[7] (as found in the persistence of lineage institutions, practices, and stories) in this village is evoked through the pairing of photographs with detailed architectural drawings based on everyday observations, family and village lore, and informal talks. These pairs that I have termed 'diptychs' are complemented with 'thick descriptions'[8] that form the reading key and incorporate time dimensions that are not possible in the more static media of photographs and drawings. The method of the diptych is tailored specifically to the purpose of capturing and showing the lineage as intertwined with the landscape, its continual inscription but also inevitable change over time. The concept of the diptych is borrowed from the arts; in the essay, the visual pair hinges on each other, and both panels serve to reinforce and complete the other. Although both have the same subject, they work in a complementary way: the photograph makes the landscape – its materiality and color, its abundance – instantly tangible, while the drawing highlights aspects (through colors) of the same scene that would otherwise not be immediately legible. They require the reader to actively compare, jumping from one to the other.

4.1 Diptychs

The first diptych focuses on the exterior of three houses in the village, for which three types of transformations at different time rhythms are inscribed on and around the buildings. Each theme is highlighted through a different color, set against the black and white cavalier drawing. This projection was specifically chosen to keep the drawing as a measurable document. At the same time, I kept in mind the history of Chinese representation, which did not privilege a single fixed vantage point but instead valued the possibility of the wandering eye/mind.

7 For the purpose of the essay, the lineage is defined as an institution centred around three core characteristics: common patrilineal descent from one single ancestor beyond the single household, ancestor worship, and the continuation of the family line.

8 The concept of "thick descriptions" was borrowed and extended by anthropologist Clifford Geertz to define ethnographic descriptions that are opposed to "thin descriptions," which are merely factual in nature. The former are the result of extensive fieldwork and describe complex environments in a comprehensive and detailed way, set against their wider cultural and social context. (DBNL, 2012; Luhrmann, 2001)

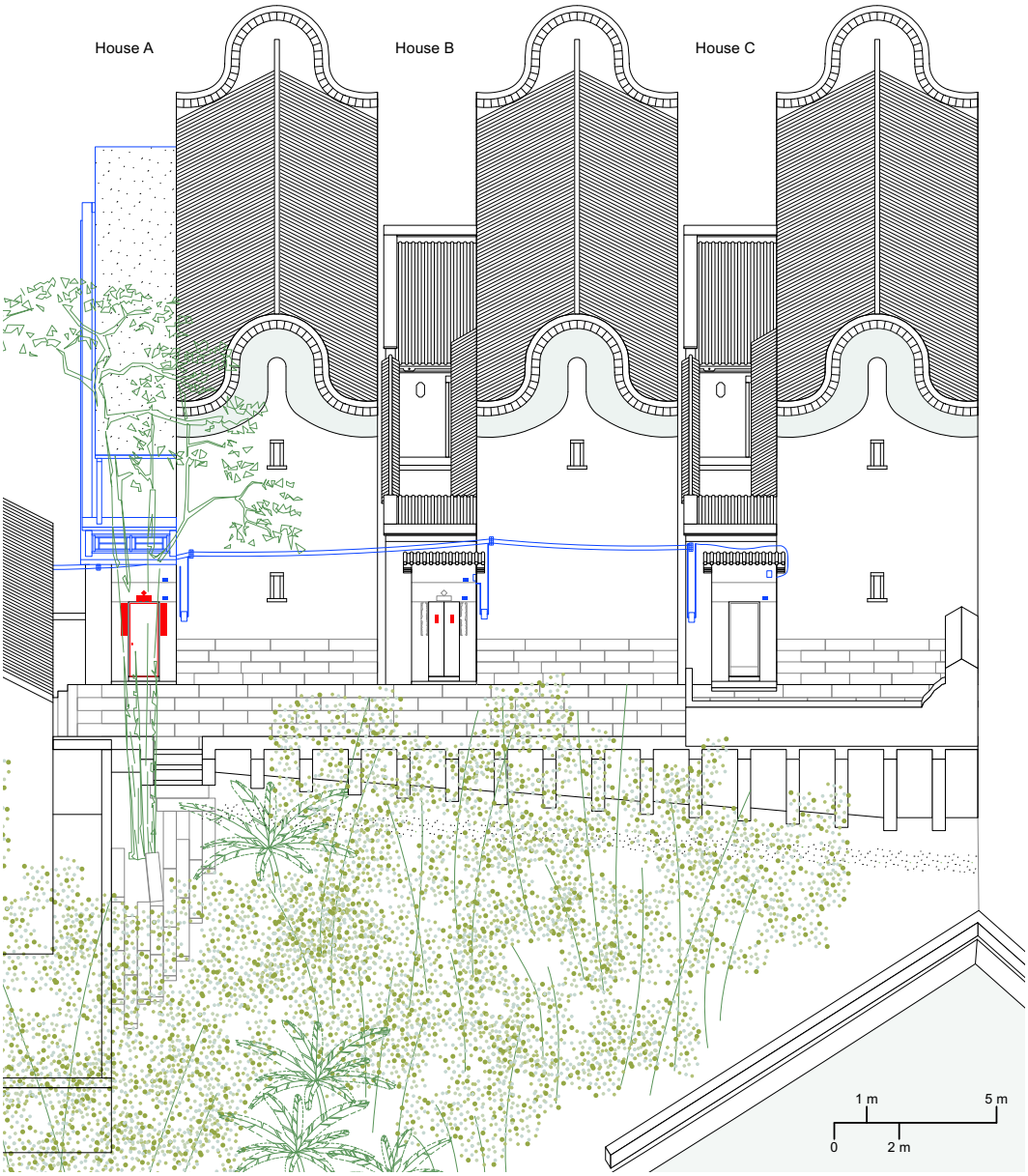


FIGURE 3 Three (ancestral) houses in transformation, drawing 2022 (Hong Wan Chan)

According to family history, the three houses were built simultaneously sometime in the 19th century by my great-great-grandfather. They stand as three quasi-identical siblings in the landscape of the village – with the same proportions, detailing, material use – and have been occupied by my ancestor's kin over the generations, although the new material conditions of today's market society have left them largely unoccupied. Though at first glance, they have retained their general architectural appearance over time, the diptych traces their subtle transformations and shifting uses by pointing to adaptations made over time and small signs of use and disuse, care, and neglect. Their necessary periodic religious re-inscription is highlighted in red, while blue maps practical adaptations over a longer period, and green represents the seemingly unruly plants and trees that are, in fact, cared for. Although built at the same time, they each have a distinct biography, as signaled by their use and care regime: house A is occupied during the daytime, its occupants – an elderly couple, my distant uncle and aunt – returning at night to their apartment in the town center nearby; while house C is left empty and serves only as a storage space; house B, in turn, falls somewhere in between the two conditions, where small signs on the exterior point to a limited use.



FIGURE 4 Three (ancestral) houses in transformation, Photo 2018 (Hong Wan Chan)

Moving to the interior of the three houses, a photograph of house B's central shrine is combined with more conventional plans and sections of the houses, allowing a simultaneous comparison and discussion of the three interiors.

This diptych shows the religious inscriptions (in red) needed in the interior to maintain the home. Again, each interior reveals another condition and afterlife. Although house A is no longer occupied full-time, a range of deities and the ancestors still hold their place in the house and are frequently attended to. They occupy smaller and larger shrines and recesses in the walls or dwell in posters and granite reliefs. House C is stripped of any such presence, niches and shrines left bare. House B, again, falls in between the two.



FIGURE 5 Places for the gods and ancestors in the domestic interior, Photo 2017 (Hong Wan Chan)

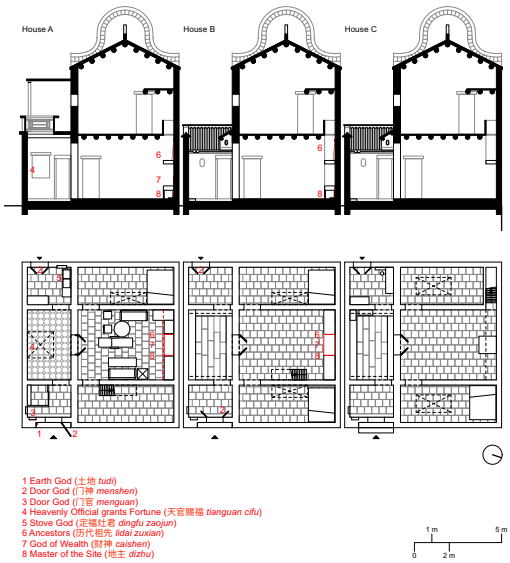


FIGURE 6 Places for the gods and ancestors in the domestic interior, Drawing 2022 (Hong Wan Chan)

4.2 Reflections – using the architectural drawing kit as distant insider

4.2.1 Evidence – inside and outside

I started visiting my ancestral village long before I began my architecture training, which has inevitably directed my gaze toward that of the ancestral through my position within my lineage. As such, access to materials and their gathering have occurred less systematically and over a long stretch of time. I have relied on stories that have been delivered across generations, retold again and again, set against the customs and wider historical change of the area. At the same time, photo sets that I made between 2013 and 2018 are but a snapshot in time. There is a certain ambiguity that has characterized this method, allowed by my position as an insider – albeit born in the world outside. This same tension is also there between the brevity of my visits and my relative young age and the time depth I aim for, and again repeated in the medium of the static photograph and the drawing in relation to the thick descriptions, which capture the continual repetition of ritual and story over time.

Furthermore, my access to the village is not entirely frictionless nor evident, a realization that became all the more obvious when the COVID-19 pandemic cut short an extended research stay and barred access to China as a foreign national. At once, I found myself – although a member of the lineage – nevertheless cut off from my ancestral place. On the other hand, the practical limitations posed by this everyday reality aside, as anthropologist Charlotte Aull Davies posits, 'even in the most autobiographical forms of research, the ethnographer does not have unconditional and unhindered access to knowledge: the question of insider status is still problematic' (2007, p. 228). Even in the closest of ethnographic studies – where the ethnographer acts as a key informant themselves – there is an uneasy tension; however, it is in the "process of interaction between ethnographer-as-self and ethnographer-as-other that social knowledge of general interest and significance is produced" (Davies, 2007, p. 228). Thus, the analysis of my ancestral village through the lens of the lineage is equally an exercise in balancing distance and proximity.

4.2.2 Observations – architectural drawings

The search for this appropriate distance is taken up through my persona as an architect, heavily influenced by the disciplinary culture to which I belong (Davies, 2007, p. 9). The "cultural biography" allows me to bring together both positions. My knowledge of rituals and stories tied to my ancestral landscape then directed the selection of ensembles from a complex, multi-layered environment, ending with precise drawings, which are necessarily selective in character. In this method, the drawing – an iterative process of synthesizing the material on hand: what to show and what to obscure – also becomes the ideal device to render a degree of anonymity to the landscape and its owners. For example, unnecessary views into the private sphere can be left out. These drawings also reflect my insistence on staying on and close to the ground, resisting the urge to zoom out and rejecting totality as exemplified by the top view. Each diptych is grounded, as the landscape plays out not from above but always within.

4.2.3 Limits to presenting the landscape

As I aim to make visible aspects of the landscape that are often obscured in today's seemingly disenchanted world of the Pearl River Delta, a third question concerns that of presentation. Paper serves as both the medium that enables transmission and a constraint due to the limited sizes of journals or books. This limitation impacts the scale that can be employed for each drawing to remain legible and what falls inside or outside the frame. Likewise, the limited number of images – in the case of the essay, a total of 10 – allowed in a journal requires efficiency in showing, pushing for precision and the elimination of excess. Such practical concerns did, in fact, influence the development of the method, with the ultimate aim of creating communicable sets of diptychs. Thus, it is possible that my ancestral landscape would have been approached differently if more or fewer visual materials were allowed. Finally, the drawings themselves are subject to architectural drawing conventions and aesthetics that reflect my time, influenced by my education in a West-European country and the Flemish architecture community to which I belong.

5 Conclusion: drawing towards multiple imaginaries

Above, two complementary methods were outlined that enable 'views from somewhere' that oppose narrow, short-term analyses of the Pearl River Delta. Each provides insight into the lifeworld of Nanhai in which the vantage point continually shifts, balancing proximity and distance. Both methods rely on drawing as a crucial research instrument, demanding an awareness of the implicit assumptions and biases inherent to this tool, coupled with a continuous questioning of my own personal and disciplinary position.

In the first method, the construction of montages bridges the gap between remoteness in time and materiality. Through the architect's lens, lines, dots, symbols, and more are activated to reveal a more nuanced portrait of the transition during a period that marked the onset of the 'homogenisation of space.' The montages uncover a clearly tentative exploration situated in the 19th century, during which elements constituting the official landscape, and thus registered on the maps, were not readily abandoned when exploring new cartographic practices. This reading highlights a wavering slowness in the perception of the landscape.

In the second method, diptychs bring the distant viewer closer to a contemporary lineage landscape that necessitates constant reworking and retelling. The intimate knowledge of this lifeworld is made visible and legible through the juxtaposition of photographs and drawings, both created by me as the author. Both media are inevitably influenced by the conventions of my time.

Indeed, these two methods can only offer 'partial' yet 'faithful accounts' that are inherently time-specific, reflecting our contemporary context and my perspective. They are developed as specific responses to the issue of totalizing narratives, which are relevant today in the Chinese context and beyond. They are an effort to provide a starting point for advancing alternative imaginaries, emphasizing the need for a multiplicity of knowledge about place, as opposed to a singular view. Despite their limitations and non-exhaustiveness, they serve as a call for diverse ways of understanding one landscape.

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Design against Extinction at New York University

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Abstract

This article reviews the eco-social design work of students at the Gallatin School of Individualized Studies at New York University over the last decade. Environmental justice movements and the effects of global warming pose significant challenges to the architecture of dwellings, landscapes, and urban design communities. In response, students have placed socially and ecologically sensitive projects at the center of their design education. The justifiable moral outrage of our students has prompted us and them to rethink the methods by which we teach and imagine social environmentalism from the perspective of equity, inclusion, and the biosphere.

Keywords

design against extinction, design activism, green design, landscape architecture, New York City, design pedagogy

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1 School of the Earth

Fortunately, we do not teach at a design school. We do not have to navigate the rigid dynamics of defining ourselves as either architects, landscape architects, product creators, urbanists, or philosophers or historians thereof. We enjoy the liberty of teaching, designing, and writing about whatever we find interesting, thanks to the freethinking spirit and support of our institution. (Pause for envious readers). As a result, we do what any responsible person would do, namely to address the mounting environmental and social problems of our world. These problems seem even more urgent thanks to us being at a university which only reluctantly tries to tackle our environmental challenges and sluggishly addresses societal inequalities. We believe New York University could do much better. So, we are upset about the lack of greening of our university. Also, the unfortunate systemic, yet shifting diversity, equity, and inclusion issues at NYU across the global network (consisting of three portal campuses and twelve international sites). In response, we have individually and as a group pursued research, exhibitions, and publications attempting to turn NYU's green-speak into a reality. In pursuing these endeavors, we have been fueled by the moral outrage of our students whose social and environmental concerns are adamant. Their force, fury, and funtivities have resulted in a set of eco-social design interventions that will be the topic of this article.

Our undergraduate students have limited and/or no experience whatsoever in environmental justice, design, urban planning, or architecture. As students in a liberal arts school, they may not even have a passion for these topics; instead, they are taking our courses more out of curiosity than a curricular necessity. This allows us to imagine ourselves as the instructors in the legendary first-year introduction courses at the Bauhaus School where students enrolled without preconditions. And our syllabuses would be, just like those of that celebrated school: equally interdisciplinary and open-minded. What unites us with our students is a shared fixation on socially driven environmental concerns. In terms of curricular organization, we ask the students to design for the intimate, private, social, public, cryos, atmos, and biosphere. Diversity, biodiversity, climatic change, species extinction, and socio-ecological degradation take place within these multiple spheres, and we follow suit in our courses starting with the very personal (race, ethnicity, gender, faith, and income class) and ending with the global. This article proceeds correspondingly.

2 Socially Greening the Intimate & Public Spheres

How does that water bottle or teacup feel in your hands and on your lips? What is the shape of an ideal water flask? Even the most simple design question has complicated answers, as there is no straightforward response to the "form follows function" formula. Things get even more complicated with the added caveat that cups and lids also should function well in the ways they are produced and disposed of. Studying what it takes to create an environmentally and human-friendly design of even the simplest object, like the personal water container, amazes our students who tend to reach the conclusion that disposable paper cups and plastic lids should be a thing of the past. As a last resort, we could use old bottles to create something magical, as a sociable reminder that even in hideous things there may be a buried magnificence. The students called (successfully!) on our school's leadership to stop purchasing wasteful paper cups, plastic lids, and bottles.

3 Climate Fashion for the Social Sphere

Why is it that bowtie Bauhauslers back in the day celebrated costume design and experimental outfits while current design schools seem to shun fashion as unworthy endeavors? As students and visitors of design schools, we have enjoyed spectacular Beaux-Arts balls and extravagant masquerade parties. However, we have yet to see a design school in which students are asked to think seriously about fashion. In reading about the Bauhaus, we have imagined ourselves participating in their incredible costume parties and theatrical productions, and we decided to have a go for it ourselves. We wanted sustainable clothing to look good. Anyone hanging around climate and extinction rebels, as we do, would know that they tend not to put fashion at the forefront – thus missing out on the opportunity of using fashion to communicate their message. We begin by challenging our students to take part in a t-shirt contest, which entails cutting and sewing an ordinary used t-shirt into something extravagant. By using the same clothing as a point of departure, we leveled the field so that students can compare and contrast the results better. Using a sewing machine, needle and thread, or scissors can be a new experience for many, in effect training them to become more self-reliant. The old t-shirt at the bottom of a drawer at home may, as a result, re-emerge as something new and special. Likewise, the rising water levels due to climate change require us all to rethink life jackets, most of which are charmingly bulky and unfashionable. The "global warming life jacket challenge" has resulted in a series of innovative outfits by our students, often reflecting the very ugliness of pollution. Fashion does not have to be beautiful, as pollution is not. Another favorite among our clothing designs has been an assignment where students transform emergency blankets given to refugees into a welcoming outfit. Finally, the general assignment of turning waste into haute couture has been, perhaps, the most popular one among our students.



FIGURE 1 Lifejacket for Aruba, an Island country drowning due to climate change.

4 Rebuilding the Public Sphere

Neither NYU nor New York City is impressive in terms of environmental policies, despite – or perhaps because of – the broad-minded cultures they contain. Pollution, waste, poverty, and conspicuous consumption are just a few keywords describing where we work and live. So we asked our students to imagine an entirely new and better city and educational institution, including reimagining roads, transportation, and so forth. One particularly innovative result has been the plan for a new "School of the Earth" at NYU. They envisioned it to be free and open to the public. It would have a new building, a green educational program, no annoying administration (of course), plus energy architecture, urban farming, public outreach, and much more. The ideas were all combined by the students into a film, a booklet, a webpage, and a student exhibition which included a six feet high model of the imagined building.



FIGURE 2 Model of 'The School of the Earth' being made.

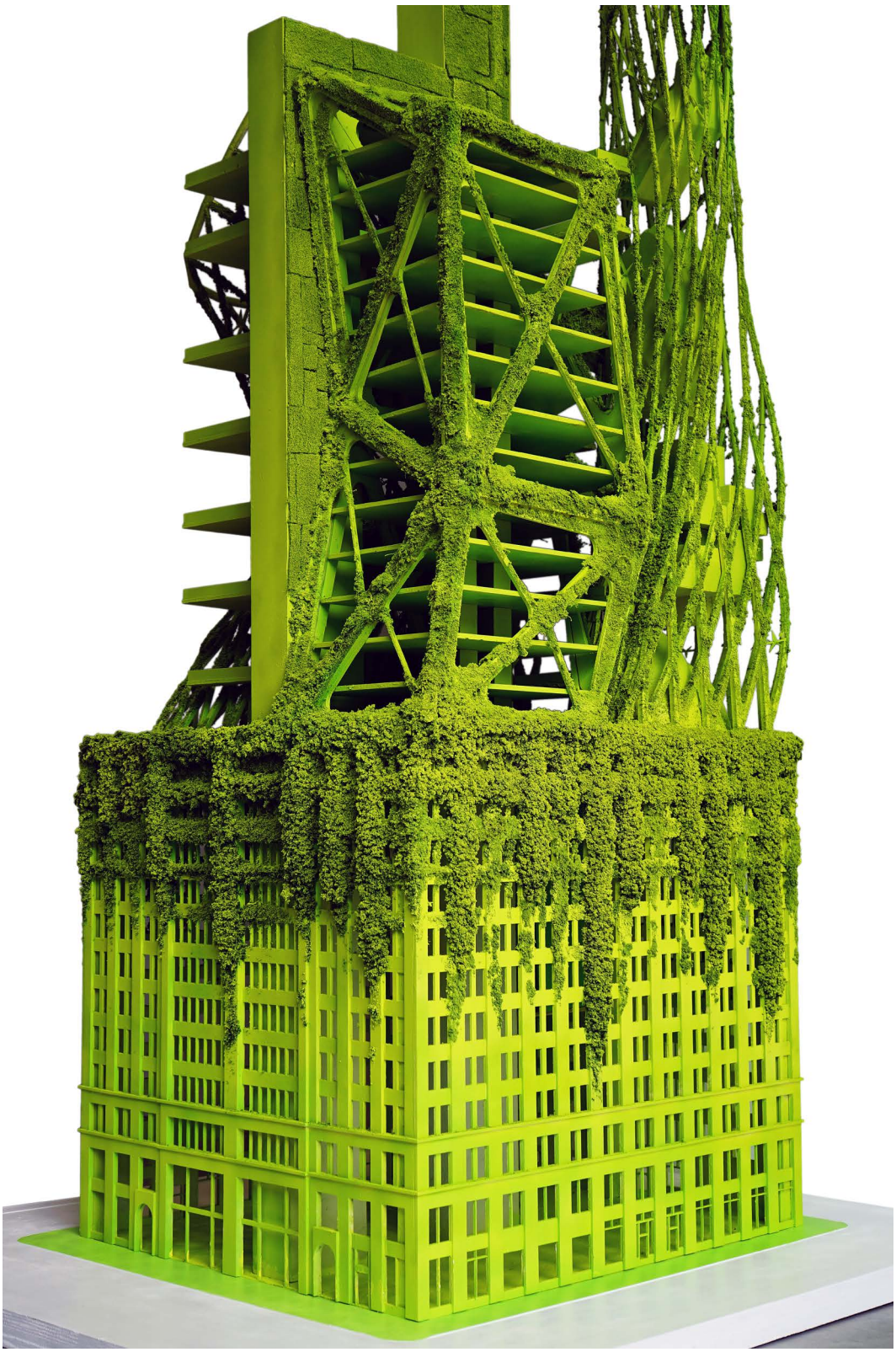


FIGURE 3 Close-up of the School of the Earth Model.

5 In Defense of the Cryosphere and Atmosphere

To involve students in the environmental problems of the icy cryosphere and the invisible atmosphere is a challenge. Building ice sculptures would not do the trick unless they melt in a meaningful way. Ice is a material that is less stable and controllable in the classroom, making it unattractive for educational purposes. But we tried, and the result came in the format of a film in which we used large ice cubes to write a message of support for the Paris Climate Agreement. That ice would melt next to the traditional Washington Square Christmas tree was, to us, a message in itself, and we put it on display by writing "Climate Deal Now!" by pushing large ice cubes along the square slowly enough to mark the ground with meltwater. Not a particularly impressive design, but nevertheless fun and engaging for students seeking to make an impact.



FIGURE 4 "Climate deal now!" Writing with melting ice in NYC in December.

Together with our colleagues and staff, with our colleague Louise Harpman at the helm, we made another similar intervention in defense of the atmosphere. By using close to fifty human-held mirrors in a heliostat formation, we were able to direct a strong beam of sunlight directly into the office of our university's president. The purpose was to "shine the light" on the ways NYU needs to commit to using renewable energy instead of polluting fossil fuels and also divest its endowment from fossil fuel companies. It became an annoying moment of enlightenment for our leadership who were blinded with energy from the sun. To us, it was a fairly innocent attempt to engage them (and our students) on the importance of not relying on atmospheric greenhouse gases when producing energy.

6 Creating a Microcosm for a Better Biosphere

Times Square is a place for dreams. Endless streams of imaginary stories from Broadway's many theaters have produced films, books, design, and fashion for the world. The power of these stories has spread far and fast, and the further away from New York, the more powerful they seem to get. Whatever takes place in the imagined worlds of Broadway shows is not happening at Times Square itself, which is nothing but a despicable place of roaring human exploitation, unbearable pollution, and high-gear capitalism empowered by hard-core Disneyfication. So we decided to make an intervention in favor of the biosphere. Once upon a time, there was no Times Square, only the Wickquasgeck Trail carved out by the Metoac band of the Lenape Native Americans. The land itself was lush with plants, rich swamps, insects, bird and animal life. Hunting was excellent, which is evident in them naming the land manaháhtaan, which can be translated as a "place for gathering the (wood to make) bows." They respected and cared for the land until they were forced to leave, based on a fraudulent deal in which they sold the island for beads and trinkets (for the equivalent of $24 in current value). This celebrated 'greatest deal ever' in record books began a process of expulsion ending with the Metoac now living in the tiny impoverished Shinnecock Indian Nation next to the flamboyantly wealthy village of Southampton in Long Island. Our dream was to somehow resurrect the power of the lost land by creating a garden or a green space at Times Square. If the place enabled Disney to spew out their sexist patriarchal story about The Lion King, why could we not use the place to mobilize a more environmentally friendly vision for the world? With our students, we dove into the pages of Eric Sanderson's amazing book Mannahatta: A Natural History of New York City (2009) to find out precisely what Times Square looked like back in the day when the Metoac lived with the land. Then we assigned them with the task of imagining a new lush green redesigned square that would empower the weak and be a friendly hub for all species.

No strings attached, we told them, just dream up something better than the polluting narcotic nightmare which is there now. Dreams matter. And they need to be nurtured in order for them to be able to frame our future. Yet if never realized they will only serve as a fool's escapism. We, therefore, decided to turn Times Square into a green space for real. If Nike could promote yet another selection of polluting plastic shoes at the Square, why couldn't we be allowed to promote our vision for a greener world? Legally speaking, the Square is actually a public space, and the Times Square Alliance generously thus gave us all the necessary permits. For free. As it turns out, we were not the only ones harboring a dream for a greener New York City. Our undergraduate students had no experience whatsoever in designing urban spaces, and even less so in building them. And as they had no idea of what they were doing, thus pursued the task with confidence and enthusiasm. This was to be their project, their dream, not ours. First they imagined dropping an "Earth Bomb" at the Square that when blowing up would splatter seeds and greenery everywhere. We loved that, though the ever-present police at the Square may have been less amused. We kept the round bomb shape but relabeled it to be an 'Orb.' With that came the idea of the Orb to be a microcosm for a better microcosm, like those crystal balls once used by the medieval spiritualists and magicians. The electric company Con Ed uses a triangle-shaped plastic barrier to fence off their work, and these tend to dominate New York City streets. Picking them up when done may not be cost-efficient for the company, so they are often left behind.

We collected some of these barriers to construct our Orb (and would later return them to where we found them). We then decorated the Orb and its surroundings with attractive greenery. The Earth Bomb idea had not entirely left us, however, as the truck carrying the Orb to the site crashed into one of the commercial screens that hovers over Times Square. It was a moment of rebellious joy among our students and of real fear for us as responsible professors for having to pay for the damage. Fortunately, New York University's legal team was able to skew the million-dollar bill in the direction of the rental car insurance company. When walking into our Orb, visitors would walk into a forest of grass balls grown in used stockings inspired, partly, by the work of the artist Ernesto Neto.



FIGURE 5 Inside Times Square Electronic Garden with Suspended Grassy Balls for Motion and Sound Interaction

We had great fun creating these; filling the stockings with earth and grass seeds, and watching them grow into lush green hanging lawns. The idea behind them was a group of mostly female NYU master students in engineering. When massaging the balls, they would make squeaky sounds of pleasure, which grass expressed (they imagined) in the sounds of gurgling water. The engineering behind it was extraordinary in the merging of the natural and artificial of what became an 'electronic' garden. A symphony of water sounds from dripping to splashing was what visitors heard when squeezing, touching, or rubbing down our forest of hanging grass balls. They became species with needs and desires for us to please and respect. The hidden speakers and live sensors among the plants were supposed to connect to our URL. At least that is what we tried to convey



In the Times Electronic Square Garden project, we tried to initiate a conversation about climate change, energy use, and green urban spaces. The idea was to re-nature Times Square so that the public can contemplate and envision new natural environments within our cities. We invited people to explore soothing living vegetative surfaces and recognize the stark contrast of their hyper-electrified surroundings. The students designed and built an open central sphere for visitors to circulate through so that they could encounter a microcosm of what a healthy biosphere would be like. And around the Orb, we set up a greenscape of serpentine living benches for rest, gathering, and contemplation. The whole project, start-to-finish, was erected and removed in a 24-hour period. For this short period, we had managed to place within Times Square's consumer culture a dream of a sumptuous environmental future.



FIGURE 6 Times Square Electronic Garden.

8 Conclusion

We achieved nothing. As a species, we are moving towards extinction at a record speed with climate change, the planet's sixth mass extinction, an immense loss of natural habitat, a colossal amount of pollution, social upheavals, and various unending conflicts. Yet we tried. Together with our students, we sought to imagine better alternatives and also how to achieve those dreams by the means of design. These have been bewildering ambiguous paths, however, and intentionally so. Instead of offering silver bullets and one-size-fits-all solutions, the design projects sought to tease and tickle our students and audiences, thereby forcing us all to see our future differently. Design against extinction is an educational platform trying to change the world towards something better.

Credits and acknowledgments

We would like to acknowledge about hundred and fifty students who have taken our design courses, contributed to realizing the projects, and inspired us to rethink they ways in which we teach green design. We are equally grateful to our former Dean Susanne Wofford who generously supported these classes and projects financially.

Lifejacket Fashion

Instructors: Peder Anker, Mitchell Joachim, Design with Climate Change Students. Lifejacket for Aruba by Harry Hooper. Model: Rogue James. Photo: NYU Photo Bureau

Climate deal now! (writing with ice)

Producers: Peder Anker, Stephen Duncombe, Louise Harpman, Mitchell Joachim, Keith Miller. Director: Keith Miller. Camera & Editor: Maria Juranic. Still photos: Em Watson. NYU Gallatin students: Emily Bellor, Carter Bird, Taylor Brock, Sophie Epstein, Dylan Fauss, Jonathan Friedman, Carly Krakow, Sara Ludwick, Jake Madoff, Rachel Stern, Maxwell Thoeny, Em Watson.

Times Square Electronic Garden

Producers: Mitchell Joachim, Louise Harpman, Peder Anker. Film Media: Keith Miller. NYU Tish students: Namira Abdulgani, Kylin Chen, Ella Dagan, Jordan Frand, Michelle Hessel, Renata Kuba, Gal Nissim, Isabel Paez, Tigran Paravyan, Lutfiadi Rahmanto, Leslie Ruckman, Abhishek Singh, Edson Soares, Katie Temrowski, Jed Watson, Yan Zhao, Yang Zhao. NYU Gallatin students: Theo Mandin-Lee, Jordan Marks, Max Mezzomo, Valerie Mu, Shel Orock, Alex Selz, Henry Wang. NYU Staff: Karim Ahmed, Jenny Kijowski, Nicholas P Likos, Lillian J Warner, Matthew Tarpley, Shandor Hassan, Shai Pelled.

School of the Earth

Instructors: Peder Anker, Mitchell Joachim. Model overseer: Karim Ahmed. NYU Gallatin students: Ryan Porter Andrewsen, Aliza Joy Blond, Brian Cash Callaghan, Danielle Margo Domsky, Juan Diego Galvez, Sophia Hampton, Michelle Lee Johnson, Laura Sejin Jung, Devansh Majithia, Annie S Pluimer, Cecilia Reid, Anna L Robertson, Arielle A Ross, Olivia Catherine Saber, Alejandro Santana, Sabrina A Santos, Joshua Jackson Shapiro, Cate Stitt Stern, Hanna Danielle Stern, Rachel N Stern, Celine Sutter, Leland R Sutton, Zoya Hannah Teirstein, and Jenna Hallie Zimmerman.

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