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DESIGN PROCESSES FOR TRANSITION

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DESIGN FOR URBAN TRANSITIONS

EXPLORING CURRENT LEXICON AND
CONTEMPORARY TRANSDISCIPLINARY
AGENCIES

FABRIZIA BERLINGIERI
GIULIA SETTI

Frameworks

Sometimes the research paths nourish through a particular occasion. It is an encounter, a singular short circuit that brings together skills, people, and work environments unfamiliar to each other, even if alike. The strange alchemy becomes a possible dialogue, shaping knowledge hybridizations and unexpected experiments. The book *Design Processes for Transition* is an example of that, arising from a particular opportunity and bearer of an unusual combination of expertise. The specific opportunity was provided by the proposal for an elective course within the Ph.D. program of *Architecture, Urban and Interior Design*¹ at Politecnico di Milano, precisely thanks to the coordinator's invitation to explore contemporary design issues through intensive workshop activities together with the Ph.D. student. We—the authors—deliberately based the proposal on crossing different yet similar research themes and experiences we developed along the five-year research project *Territorial Fragilities*² at the Department of Architecture and Urban Studies. The project's core explores the ongoing processes of spatial and social fragilization in Italy and Europe in terms of exposure to an array of risk factors—from environmental to social and economic—and their related impact on the physical substrate of cities and territories. The elective Ph.D. workshop is part of the substantial series of actions organized by the Territorial Fragilities laboratory, promoting seminars, research, and design activities with a transdisciplinary approach to investigating urban contexts and extended urbanized areas currently facing environmental and climatic fragilities. Also, the prodromes of this book move from other crossings with an extensive European network often exchanging on similar topics³ and present here thanks to the partnership between the Politecnico di Milano and the Delft University of Technology.⁴

1. The *Architecture, Urban and Interior Design* Ph.D. program at Politecnico di Milano promotes studies on urban and architectural disciplines centered on a design-driven approach, prof. Alessandro Rocca currently holds the program as coordinator. For more information, see www.auid.polimi.it.

2. Territorial Fragility is a research project within the Department of Architecture and Urban Studies, funded by the Italian Ministry of University and Education from 2018 to 2022. The research group, with the scientific director, prof. Gabriele Pasqui, works on Italian and European case studies on antifragility design and policies for marginal territories. For more information, see www.fragilitàterritoriali.it.

3. We refer to common research activities resulting in the publication: Berlingieri F., Cavallo R., Corradi E. & de Boer H., eds. (2022) *Design Actions for Shifting Conditions*. Delft: TU Delft Open Books, DOI: <https://doi.org/10.34641/mg.24>.

4. Indeed, the Ph.D. workshop has been curated and organized by the authors together with Roberto Cavallo, Department of Architecture, Faculty of Architecture and the Built Environment, Delft University of Technology.

On a global level, the contemporary political and public agendas regulate the clock's hands of their main decision-making processes according to the clear awareness of living in an era characterized by structural transitions, as an expanded time in which the past models and the blurry visions of a more-than-near future coexist. We look at Structural Transitions as the proper reference to an interdisciplinary and conceptual framework primarily focused on conceiving the embodiment of this paradigmatic shift (Bulkeley & Betsill 2003), addressing the spatial impacts on cities and metropolitan contexts, which will be the main actors of transformation in the coming decades (Sijmons, 2014). Structural Transitions, indeed, face the several challenges related to the intertwined phenomena characterized by demographic unbalances and the progressive urbanization versus the abandonment of the agricultural land (UN 2018), and in general the significant changes we experience vis-a-vis the consequences of Climate Change dynamics (Marvin & Buckley 2018) related to the understanding of a limited resources planet, smaller and overconnected (Gandy 2015). Timothy Morton (2016) describes the implications that, very shortly, climate change will bring to our cities and, therefore, opens the reflection on the need to define new forms of cohabitation and survival up to the "Post-Human" scenarios introduced by Rosi Braidotti (2013), a few years ago. Specifically, Braidotti perspective on the development of a post-anthropocentric theory marks a definitive break with the traditional distinction between what is human and the rest. Today the boundaries are increasingly blurred and uncertain, and the advent of genetic modification of food, robotics, and reproductive technologies is an emerging ground, where the distinctions between species, humans, plants, and animals, gradually fade and open up to new possible forms of adaptation and sustainability (Braidotti 2013).

The interlacing of ecology, politics, technology, and social behavior is crucial for contemporary design research and practices on environmental rebalancing. By looking at current urban design practices, an expanded field emerges. Its foundations rely on the high standards of specialized knowledge in which the predominance of eco-technicism seems to be the leading research perspective able to face and orient solutions for the crisis we experience. Several metropolitan areas are promoting a cultural shift towards ecological transition and have already adopted action plans for future development with a specific reference to adaptive design strategies to cope with the ongoing climate change dynamics. But in this grasping race for remedies and short-term solutions to mitigate the effects of choices that have proved to be profoundly unjust and harmful, scarce space (and time) is offered for a broader reflection able to look beyond statistical data and "hard sciences" recipes. Beyond taking the hit and immediately changing the course for managing natural resources to design more liveable cities, we should not

forget to aim for deep thinking. In that sense, the perspective taken by the book *Design Processes for Transition* stands at the crossroad between those who, through practice, constantly reflect on the ways of facing contemporary challenges dictated by the climate urgency and those who reflect on these practices through architectural and urban research. The contribution that the book proposes, together with the research from which it starts, sets the precise limit of deconstructing rhetoric discourses and building new narratives that offer a lateral point of view. And this is something we increasingly feel the need for. We should promote a constant critical approach vis-à-vis the increasingly univocal slogans justifying what is hardly justifiable or research positions that just mirror the rhetoric of the moment.

What are the design processes characterizing ongoing practices and research for contemporary urban spaces dealing with Climate Change effects? Can we critically explore them by identifying specific research tools and keywords through a transdisciplinary approach? How do we discuss the concept of “process” within the design of contemporary urban spaces dealing with Climate Change impact? These are just some of the questions we tried to answer during the research activities, portraying the solicitations we used to interrogate contemporary design practices and strategies. *Design Processes for Transition* attempts to investigate the profound transformation of urban (open) spaces under the pressure of contemporary environmental rebalancing and to valuably expand the meanings of “processes” in the sphere of architectural design, tackling precariousness and adaptation as the main frameworks for contemporary design agencies. This task specifically engages ongoing open spaces projects in urban and metropolitan contexts related to the legacy of XX century urbanization and postindustrial conditions in Europe, and the related current policies about adaptive urban form. The *where and how*, indeed, are the focus of this punctual survey, exploring specific case studies, being the specific lens adopted along the Ph.D. workshop activities. Moreover, our main interest is to deepen and manipulate transdisciplinary tools for architectural and urban design research. Also, this was a central choice for our research perspective, not focusing on the project results but reasoning on the recurrences of design strategies for the urban ecological transition and investigating the procedural aspects.

Around the research activities

What are the contemporary design strategies for adaptive urban space? How can we address climate change design and challenge the current rhetorics? These are the main questions we asked the ten Ph.D. students at the initial stage of the workshop, trying to open a debate on the ongoing projects and research under the lens of sustainability in the built fabric and its regulations

being defined by the EU for the New Green Deal 2019. Over the last decades, we have been overwhelmed by concepts such as sustainability, vulnerability, mitigation, and the latest adaptation and resilience. This emerging lexicon guides our decisions as architects and researchers in the urban field. Yet, the lexicon, which should constitute a steady rudder to navigate these stormy waters, often takes on increasingly abused rhetoric; on the contrary, it seems the only option to define the uncertainty in the design practice. The questioning of the current environmental lexicon aimed to pinpoint—resulting in a sort of synthetic glossary and literary review—paradoxes and overestimated strategies that currently forge the global panorama in design discipline for contemporary urban space. From a methodological point of view, the research fed on lectures and collective discussions during the one-week intense workshop with ten Ph.D. students, grounding the activities on model-making and *research by design* approach and exploring how it is possible to imagine, design, and build tools for adaptive (public, semi-public, hybrid) spaces in the contemporary era.

The first phase of the research activities focused on forming a collective glossary. The Ph.D. candidates had to choose a keyword and explore it via design examples and theoretical positions. The outcomes presented five keywords that are, in our opinion, a partial critical reading of the processes of changing and adaptation underway: *Lo-Tech*, *Renaturalization*, *Symbiosis*, *Temporary*, and *Tentative*. In defining and justifying the keyword choice, we asked to produce a short text of two pages, a reference image, and a maximum of five bibliographical references. For the second phase, the Ph.D. candidates worked to critically analyze multiple tools applied, in the current architectural design panorama, to adaptive urban spaces and projects and to select the right one to match their keywords, fostering a transdisciplinary approach. During the many discussions and reviews, we asked the Ph.D. candidates to break some disciplinary and semantic boundaries by building new research perspectives and exploring lateral trajectories by relating different tools or unconventionally using them. The idea of transdisciplinarity, which we pursued during the workshop, was oriented to open a glaze to tools, operations, and strategies from different disciplinary fields to build a new synthesis and push towards the construction of common and shared knowledge. A transdisciplinary approach intentionally interweaves different ways of knowing in all phases of a research project, including naming research problems, questions, and goals, selecting theoretical and conceptual frameworks, selecting methods, gathering and analyzing data, and communicating findings. The reappropriation of a tool served as crucial access to probe and test a different approach on the specific case studies. Many exciting ideas emerged that describe a careful ability to grasp links

between projects, processes, and strategies in researching on and through a design experience. The associations built by the Ph.D. candidates between keywords and tools highlight some project trajectories developed in the last phase of the workshop. *Lo-Tech* has combined with *Design Anatomy* tool, suggesting the need to establish a taxonomic investigation of architectural elements; *Renaturalization* with *Section*, while the concept of *Symbiosis* has been explored through *Visual Narrative*, in which the critical reading of metabolism position becomes a graphic novel. The transition of urban spaces, defined by the word *Temporary*, associates the investigation tool of *Photoreportage*; finally, the concept of *Tentative*, within the idea of multiple choices and actors, has been visualized through *Gaming*. In designing this workshop, we repeatedly questioned ourselves about the meaning of producing—and concluding—a research project carried out in a few weeks and about how to present the results in a deliberately unfinished or definitive form. At the same time, it seemed essential to us to lead Ph.D. candidates to reflect on the “making process” and to encourage them to produce an object, a drawing, or a vision that would relate the keyword and the tool through the lens of architectural design. For this reason, we already asked in the course’s synopsis to present, as the outcome, a synthetic artifact that could range from a conceptual model or a speculative drawing, a short movie, or an interactive tool. However, we emphasized that the output must be *design-based*, resulting in visuals. We have, in essence, set up some rules in the construction of the final product, leaving plenty of freedom of choice and imagination. The workshop’s objective was not to be “a pilot design” or a case study design development but more the construction and design of a *Wunderkammer* of tools for architectural research relating to urban form and climate change. The idea to build a *Wunderkammer* stems from the desire to collect, in an experimental process, possible combinations and ways of reading, interpreting, and questioning contemporary design research for the built environment.

Around the book

The editors have thought of the book’s structure as a collection of theoretical and design reflections made by experts, practitioners, and Ph.D. candidates around the capacity to critically investigate the current design approaches vis-a-vis the inducted transitions in contemporary urban conditions. Starting from the reconsideration of the current lexicon used to describe the current processes of transition in the architectural field, it develops as a collection of graphic and *visual micro-narratives*, building a questioning platform between experts, designers, young and experienced researchers in the design fields. The book is composed of a sequence of micro-stories that could be read independently of the subsequent ones or that, on the contrary, could

produce new and exciting correlations. The essays collected in the book focus, specifically, on the methodological aspects of conducting research in architectural design, particularly for Ph.D. candidates, reflecting the triad and the phases that governed the organization of the intense workshop week: 1/ Questioning the current lexicon; 2/ Exploring Tools; 3 / (design) Wunderkammer as final output. To substance the topics and reflections elaborated during the workshop, we invited experts and researchers who generously contributed with their research to form a reference framework for the training activities.

The essays define the first framework of the book, of a theoretical nature, which is intertwined with the contributions of the Ph.D. students, deepening the research activities. The book opens with Fabrizia Berlingieri's essay, *Processes and Aesthetics in contemporary urban design practices*, exploring the nuances that the procedural aspects assume in today's architectural and urban design practices, linking them to the emerging aesthetics of urban renaturation. The procedural role of the design, and the infinite variations that current conditions produce, are also at the center of Marianna Frangipane's contribution, *Tentative / Gaming*, which imagines the construction of a role-playing game where different protagonists and unexpected events can change the fate of a project. The essay *A multifaceted interplay. Envisioning built environment transformations in the contemporary urban context* by Roberto Cavallo proposes a set of guiding questions and hints to explore contextual design, intended as a physical but societal context, discussing differences between the practice and the research approach. Connected to that, the work developed by Oljer Cardenas and Alessia Macchiavello, *Lo-Tech / Design Anatomy*, compares, through some specific categories, the projects of Amancio d'Alpoim Miranda Guedes and Pierre Jeanneret, two architects who tried to understand the environment, culture, and climate of the places where they worked (Mozambique and India), designing buildings with low tech solutions. Alessandro Rocca's essay, *Wilderness: the lagoon as an infrastructure*, studies the concept of *Wilderness* starting from a design opportunity conducted on an island in the Venetian lagoon. In this case, the design offers an "a posteriori" reconstruction of a set of theoretical and architectural references used to define it. Chiara Pradel's exercise, instead, compares two terms, *Renaturalization / Section*, of great relevance in the debate on landscape architecture; her work describes the concept of *Renaturalization* as an approach that questions scale and time in the design phases. Nina Rappaport, on the other hand, offers a reflection on the topic of the *Hybrid*; in her text, *Optimistic Hybrids*, she suggests new types of hybrid buildings that can increasingly accommodate production, manufacturing, and small production activities, along with spaces for living and services for the community. To

adapt to change means, for Nina Rappaport, to integrate and rethink how we conduct our activities, avoiding segregation and separation. The exercise developed by Carla Rizzo and Sarah Javed Shah, *Temporary / Photoreportage*, assumes the transformation of public spaces as a field of experimentation and tests the concept of temporary and transitory, through the use of photography, for the case study of Piazza Spoleto, an ongoing community-driven project of Piazza Aperte developed in Milan. Giulia Setti's essay, *In search of adaptation: exploring design tools and theory*, investigates the meanings of the term adaptation and, more specifically, proposes the definition of categories of interpretation that determine design strategies to operate in unstable and flexible contexts. A broad panorama underlines the urgency and needs to find new design tools to handle increasingly changing scenarios. The work of Xiang Li, Xiaoyun Liu, and Zhaozhan Lu, named *Symbiosis / Visual narrative*, studies the evolution of *Symbiosis* starting from the concept of Metabolism developed by the Japanese architecture of Kurokawa and Kenzo Tange, up to the contemporary era. The exercise explores changes and mutations through a collage of representative projects, identifying common features in each phase, from mechanical bodies with replaceable units to more transparent and flexible architecture that interacts with circumstances and emphasizes individuals. In conclusion, the volume presents two contributions by Jacopo Leveratto and Stamatina Kousidi that speculate on the methodology used during the workshop and the results produced. In the contribution *On Apparatuses, Agencies, and Affordances: Breaking Down the Design Lexicon for Transition*, Jacopo Leveratto reflects on the urgency for questioning the current lexicon and the strategies that may be helpful to address problems emerging from the recent environmental and urban transitions. Finally, the contribution of Stamatina Kousidi, *Climate / Design Change: Revisiting the In-Between in Architecture*, explores the future potential of design with and for the climate: the effects it can generate, the changes it can allow for, the degrees of engagement it can influence in the context of the contemporary city.

Opening research perspectives

More than a collection of essays, *Design Processes for Transition* consists of a sequence of interlaced micro-stories—experiences, projects, visions—attempting to define new synergies. It offers, in essence, possible interpretative opportunities, not solutions, concerning the climate and environmental transition problems that we are experiencing, with ever-increasing intensity, in our cities. Downstream of the construction efforts of this volume, there is the idea of questioning how we do research in architectural design, with which tools we intervene, and through which methodologies. We aimed to put the research methodology at the center of this book to solicit a debate that seems to us still partial, facing the ongoing

changes surrounding us and the challenges that architecture must and will have to face. In doing that, we discussed deeply the phases and the steps of these small researches and how to combine theory and practice, ideas and projects. The reflections and works of the Ph.D. students here seem to us very current because they can observe phenomena and projects with different lenses, tools, and processes. The displayed results show a broad spectrum of topics and reflections. Each topic brings another way of looking at the workshop theme and the entire structure of this volume, that of studying ongoing design processes for the environmental and climatic transition. Alongside the design research exercises, the book presents several critical essays by experts, practitioners, and researchers who collaborated during the workshop activities that questioned a keyword, a concept, or a theme similar to those treated, identifying new research trajectories or extrapolating them from ongoing exercises. For this effort, we would like to thank our colleagues Roberto Cavallo, Francesco Garofalo, Dirk van Peijpe, Nina Rappaport, and Alessandro Rocca for grasping the spirit of this experimentation and discussing it with us during these months of work. We would also like to thank Stamatina Kousidi, Jacopo Leveratto, and Gabriele Pasqui, who discussed the results of these works and brought a critical reflection on the methodology used and the objectives of this applied research.

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Depot Boijmans under
construction (Berlingieri
2021)



PROCESS, UNCERTAINTY, IMMANENCY

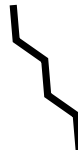
EMERGING AESTHETICS IN CONTEMPORARY ENVIRONMENTAL URBAN DESIGN PRACTICES

FABRIZIA BERLINGIERI

I.

«Ecological crisis, too abstract to afford easy pictorial representation, too much the product of complex interrelations and interactions seemingly beyond the means of individuals to comprehend or to address, is naturalized, reworked into the infantile projection of a ubiquitous greening of space for personal enjoyment». (Spencer 2019, 169)

While facing increasingly complex climate change-related dynamics, Adaptiveness appears today's leading approach—from policies to design actions—fostering a new symbiosis between the natural and the artificial environments. That is, between a natural presence as “ubiquitous greening of space for personal enjoyment” (Spencer 2019, 169) and a city that weakens its XX-century representation. Commons and public spaces, facades and roofs, entire urban fabrics change their dress in favor of interaction, but still searching a proper balance regarding the sustainability of their actual effects for economic, energy, and social costs. Douglas Spencer, in his recent contribution to Log's issue *Overcoming carbon form* (Iturbe 2019), expounds the provocative



thesis on how contemporary design practices address ecological crisis and, moreover, which influences the economic systems exercise on its imaginaries. Beyond the current overwhelming of the cities' manifestos covered by all green and blue nuances, scarce space is offered to understand *if* and *how* the urban project is changing the grayest economic growth and the interlaced urban competitiveness. That is, beyond the shapes and colors of the new propaganda, *if* and *how* urban and architectural design practices change not only the objectives but also the matters and the lexicon vis-a-vis the current urgency dictated by structural transitions (Berlingieri and Valente 2021). Quoting Cymene Howe and Anand Pandian:

«Can we [...] learn new ways of being in the face of this challenge, approaching the transmutation of the ecosphere in a spirit of experimentation rather than catastrophic risk and existential dismay?» (Howe & Pandian 2020, 22)

II.

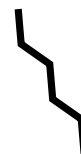
The growing importance of process within contemporary design practices is the first evidence of how lexicon is changing. The notion of process relates to Modernism being one of its statutory lemmas. Although deriving from the production chain revolutions in late XIX century, the term—in architectural and design disciplines—not only represented an instrument for organizing the phases and the structure of the project, but it substantially influenced language (Eisenmann 2006). The *Core House*, developed by Mies van der Rohe in the 1950s, is a model house with a squared floor plan, bound by a glass envelope and available in several dimensions. The steel structure consists of only four pillars at the center of each facade supporting the flat roof; inside, the walls and furnishings divide the space around the services block, the house's core (Cohen 1996). The project assumes the tones of a mathematical problem where some variables are fixed—the structure and the spatial flexibility—while the place is undefined and the terrain is generally flat. The conceptual search for experimental architecture development shifts the project vision towards approaches linked to the becoming—to future evolving—and not as a method linked to

praxis. The design focus, indeed, pregressively moved toward the Latin *pro-jectum* as the act of proceeding, funding its proper method in composing and designing. However, today's processual approach sees the irruption of the unexpected, of what threatens everything that exists due to its radical novelty and unpredictability. In that sense, the adoption of the process in design is reversal, meaning how to accommodate the uncertainty. It becomes a tentative strategy to address design in the unpredictability of external dynamics and the growing complexity of actors and scenarios. It is a willingness to open up to the unknown.

By addressing some emerging aspects in the relationship between process and aesthetic formulation, the contribution attempts to enlighten and deepen this interdependence through the critical reading of a few recent urban projects that more and more tackle design approaches for environmental rebalancing.

III.

If the nature of the process deals with the ability of responding through a rational thinking at the diversity of variables, yet it takes on strength when addressing the search for the limits of the knowable, and therefore to the exploration of the indeterminate. In recent decades, uncertainty led to new hypotheses no longer of governance but of accompaniment, especially in the context of urban policies concerning the themes of transitions and of climate adaptation (Chiodo and Chiffi 2020). The same urban environments have been defined as systems of uncertainty, thus turning more and more attention to research on the design of future scenarios through a renewed focus on the processual methods. From Rotterdam to Copenhagen, to New York and Hong Kong, the metropolitan and global urban environments concentrate efforts on planning and implementation policies by partial attempts constantly updated according to an increasingly pressing rhythm. In this framework, process translates into the profusion of a new tradition of manuals and guidelines using diagrammatic languages and extensive data analysis for drafting potential design conditions instead of circumscribed and specific ones. The project, as an open model,



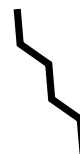
accepts the undefined as one of the resulting components, reducing the parameters of governability to alternative multiple and sometimes conflicting hypotheses. While the process was historically considered a tool for the problem's analytical decomposition—and solution—today it proposes a conscious renunciation. The interesting design experiment of the *Luchtsingel* project, about the socio-green transformation of the central station neighborhood in Rotterdam, explores the possibility of alternative urbanism based on the concept of *permanent temporality*. «Just like other living systems, the urban system forms itself over time. Therefore, the ability to deal with the unforeseen events and uncertainty in an important strength. Sustainable urban development is made possible by leaving things open instead of pinning them down – not instant urban development, but incremental and adaptive urban development.» (ZUS 2016, 307)

The design proposal combines the enhancement of natural spaces within the urban fabric, infrastructural leftovers and underused or abandoned buildings, with active social participation thanks to the crowdfunding initiative that supported the first stage as a bottom-up process. It is based on the idea that the contemporary city must progressively change through partial and temporary adaptive solutions as a design feature of transition. The interest in this project and the emerging design approach relies on the role of the process as *progressive making*, not only due to temporality but to the possibility of constant manipulations on the urban model, where the results are provisional and intermediate stages between policies and spatial transformations. It raises a sort of inability to incardinate the single project within a broader picture. Hence it becomes a sort of corollary (Bergevoet & van Tuijl 2016), a toolbox of design instruments addressed to the non-standard customization of open urban spaces. They become places that exacerbate the potential variety of usages by multiplying the functional solutions towards environmental efficiency, stressing a new aesthetic of the provisional.

IV.

«Gardening and landscape planning deal with the same domain but are different disciplines. That is the key point. As the 'scape' in landscape indicates, landscape planning is a scenic art and a visual methodology. The planner stands 'outside' the landscape and visually manipulates it. In gardening, on the other hand, no privileged position from which a 'planner' observes and manipulates the scenery exists. The 'gardener' is always inside the garden». (Kuma 1997, 49)

A constitutive principle of the resilient city presupposes the ability of the urban space not only to resist the solicitations of external agents but to modify itself through them while preserving its spatial qualities. For practices that deal with ecology and biodiversity overcoming the trap of fashionable rhetorics, the aspects of environmental instability introduce some significant challenges. The role of nature as an integrated component works not just as a moral dictate but as form-generative and sense-production for contemporary urbanscapes. The design approach of Stig L. Andersson architects considers the artificial and the natural environments as complementary components of the urban space developed according to their oppositions: rationality and intuition, structure and system, what is built, and what grows. In the ongoing project for the *Vinge Delta District*, in the municipality of Frederikssund, the built environment and the growing environment are developed together, following the principle of complementarity, with the attempt to show how this approach is valid not only at the architectural scale but also in the broader visions for the development of the city (Andersson 2015). Inlets and protrusions divide the Delta District into irregular parts with a strong connotation of the non-hierarchical natural environment. Then, the project cannot be read as a unique structure but as the juxtaposition of different, changing urban and natural situations, each of which is populated by the superimposition of different ecosystems. The complementarity of the two systems, threatened in an everchanging condition, reconstitute the aesthetic dimension of immanency.



Beyond antithesis

«By moving away from the idea of the city as the antithesis of an imagined bucolic ideal we can begin to explore the production of urban space as a synthesis between nature and culture in which long-standing ideological antinomies lose their analytical utility and political resonance. (Gandy 2006, 71)

The growing capacity of humans to take over and manipulate natural processes, in what Böhme defines as “the technical reproducibility of nature” (Böhme 2018, 167), has led to a loss of nature’s autonomy as a diverse entity. Furthermore, the competition between nature and technology has gradually flattened the latter’s perception and has pushed to rely more and more on science as a method of conquering knowledge. Even when the aesthetic debate on nature began to rise again, the so-called environmental paradigm (Carlson 2009) showed how deeply aesthetics had been influenced by an ecology that leaves the responsibility of recognizing natural beauty to science. From the design experiences and critical positions analyzed, the search for a more ambiguous natural/urban experience emerges, instead of a purely contemplative conception of distance and ecstatic neutrality. Each public space proposes activities related to sensitization, production, cultivation, and safeguarding of the natural processes. The idea underlying such clear-cut positions suggests that the forces that shape the future cities result from radical paradigm changes, reversing the antithesis status and the competition between the artificial and natural environment in new fluid and uncertain system still in need of reflecting on deeper balances.

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24 – 25



TENTATIVE

MARIANNA FRANGIPANE



Tool | Gaming

The tentative approach in design calls for innovation and opens to a collaborative process for urban transition, by considering a systemic vision of reality. The prototypes of transition allow the constant exchange of information, continuous learning, and negotiation for decision-making. It emerges the need for renovated tools to put in tension the process of making concrete experiences and observe their effects to imagine and trigger new ones. A possible design tool is gaming.

From a design perspective, the practice of gaming could represent a powerful way to intertwine social, economic, environmental, cultural, and political dynamics to shape urban places.

Gaming incorporates society and its complexity to design thought, by involving a multiplicity of players. This ability is encouraged by the narrative attitude of play that is far from technical jargon and is open to contamination by transdisciplinary knowledge.

The point of the game is not to simulate real processes to predict their effects which could be reductive, but rather to engage the unpredictable reality in envisioning new ways of living. Gaming reveals existing conditions and observes their evolution, proposes new rules, and triggers people's imaginaries by contributing to the construction of the best sense of the project. The fragments of knowledge derived from this confrontation can represent possible narrative traces in the project, thus instructing the further attempts of the modification process.

Nowadays, in a time of multifaceted crisis (ecological, social, and economic) and uncertainty, architecture needs to transcend the reductionism paradigm and work on real substance and complexity (Braidotti 2013; Morin 2016; Morton 2016; Haraway 2016; Latour 2017). How can architectural design face such complexity without reducing it?

A key text in challenging a different understanding of space is Henri Lefebvre's "The production of space". His analysis, summarized as "social space is a social product" (Lefebvre 1974), places the production of space in a broader social, dynamic, and political context. Today, Lefebvre's idea needs to be expanded by considering factors dictated by global, virtual, and ecological networks (Awan, Nishat, Till 2011). Because of such multiple interactions, each design's spatial intention has no certain prediction. To contribute to effective actions, the spatial design might embrace the challenges of the complexity of the realm, by continuously "staying with the trouble" (Haraway 2016) and directly exploring the irreducible, unpredictable, and dynamic connections between a multiplicity of factors. The core of this conception emerges as a critique on considering spatial design as a univocal answer to a formulated problem. The design (and the related research) becomes a 'tentative' practice: questioning how to rethink and regenerate our cities and how to co-operate in shaping, "how will we live together", referring to the last edition of the Venice Biennale, curated by Hashim Sarkis.

The etymology of the term 'tentative' comes from the Latin verb *tēntare*, which means at the same time tempting, feeling, and trying. Tempting outlines the

triggering value of the word by aspiring and/or inducing to do something. Feeling points out the explorative value of the word: to know something by direct touch. Trying represents the experiential value of the word: to attempt to do something that has not been yet defined but has been made as a first step experience.

The contribution of this text aims at exploring the tentative practice by focusing on process, forms, and approach, considering design as a tool to reveal the real conditions and to experience the spatial modification effects, by envisioning new futures.

Process

The tentative design opens itself a process of understanding and action, by comparing a concatenation of trials with the project contingency. The trial hypothesizes "*put the context into temptation*" (De Carlo 2000) and reveal how it could be shaped to tend towards appropriate structures and forms for the specific circumstances. The tentative design practice "*exploits the radical contingency of the process, seeking its potential, and using the project to maximize it*" (De Regibus 2020, 217). The process, which relates to the transformation of existing conditions into a set of revised and preferable ones, demands a rigorous way to investigate an unknown path through concrete experimentations (prototypes) and constant evaluation of the path itself. These prototypes are subject to a process of research. Failure and conflict are also considered important occasions for design knowledge. The aim is to move the spatial matter to a collective debate that goes even beyond architectural knowledge. This idea of prototypes has been declined by

Paola Viganò as *"prototypes of transitions"* in the Biopolitical Garden pavilion curated for the Venice Biennale in 2022.

A prototype of transition *"is made possible and supported by design explorations that give the future a real color, as if we could enter it and understand its possibilities or, on the contrary, its shortcomings, especially those that would be the undesirable outcome of a sum of good intentions"* said Paola Viganò in the pavilion description mentioned above (2022).

The outcome of the process becomes both a research process and an interactive process that could push forward the spatial modification by involving many players and competencies.

Forms

From a spatial point of view, concrete experimentations may be defined as *"tentative forms"*. This term stems from the article *"contexts in flight"* by Barbieri (2017) who considers tentative forms as tools, and not solutions, to trigger new imaginaries by revealing the qualities of the space. Barbieri refers to forms that act *"by adopting a strategy of indeterminacy, in which the renunciation implicit in the term [...] is indispensable to project, in the mixture of time, a possible prediction, which must be able to come true in different ways, even not guided from above, in a spontaneous and self-organized form"* (Barbieri 2017, 135).

This strategy of indeterminacy tends to consider the modification of the space as a result of leaving, as the third landscape of Clément (2014), rather than producing. The strategy of indeterminacy has been explored by the architect Montiel in the marginal context of Fresnillo in Zacatecas,

in 2018. The project considers a dry canal as an opportunity to regenerate the neighborhood. The architect, starting from the observation of the children who already played down the slopes, introduced open forms to embrace appropriation and tested new possible uses, in a section of the canal. The project repaved the slopes with a concrete lattice, leaving space for vegetation to sprout in the gaps, and introduced different configurations of concrete blocks to trigger a creative appropriation: slides, sideways steps, steppingstones, and climbing walls. To protect people from the sun, the existing bridges across the dry canal were replaced by structures that themselves offer a place to play and rest. The forms assume the strategic role of making space for an open appropriation by standing as open problems.

Approach

The value of these tentative experiences in the ongoing process is not to be related to the possibility to build models to replicate: it might result non-effective in an always-changing ecological and social space. The value lies in the ability to assume these experiences as traces of partial knowledge, operable to push forward the modification process. As expressed in the book *Spatial Agency* the idea is to consider a partial nature of knowledge thus: *"the sum of all these projects provides a repository of constructive means and mechanisms of how architecture can address the spatial production in a meaningful way [...]"* (Awan, Nishat, and Till 2011). The outcome of the concrete experiences does not directly lie into the effects they produce (which are often irrelevant in a long-term vision) but in the ability of the

designer/researcher to interpret these effects and transform them into operable and communicable knowledge. Such knowledge involves different players by triggering a public debate and instructing and revising the design approach and the related tools to refine new spatial conditions in the next attempts.

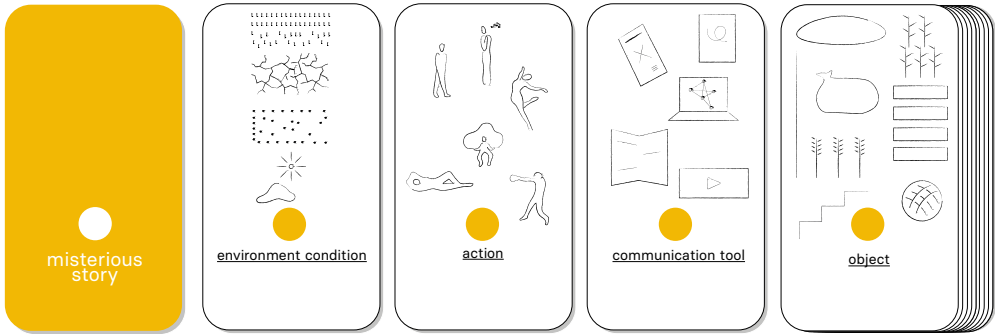
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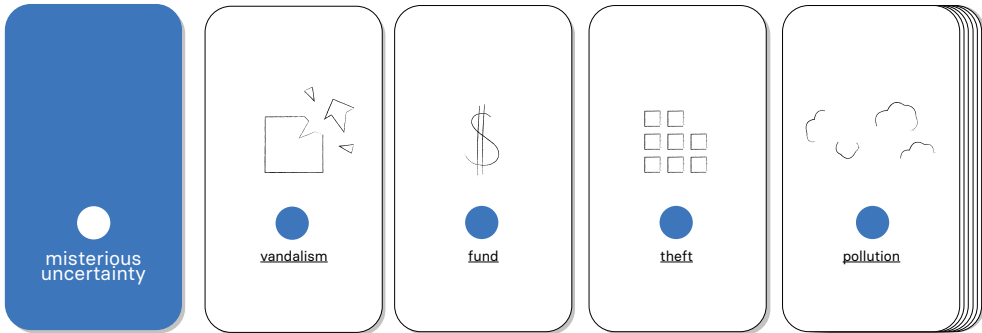
TENTATIVE

ELEMENTS OF THE GAME

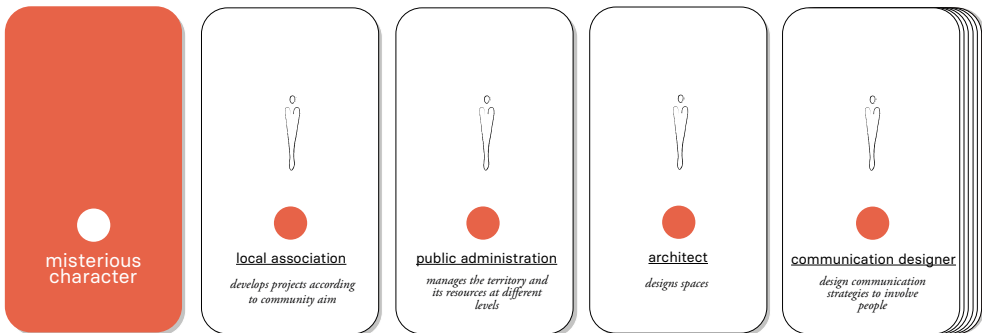
3 Decks of cards



- 30 Story cards



- 15 Uncertainty cards

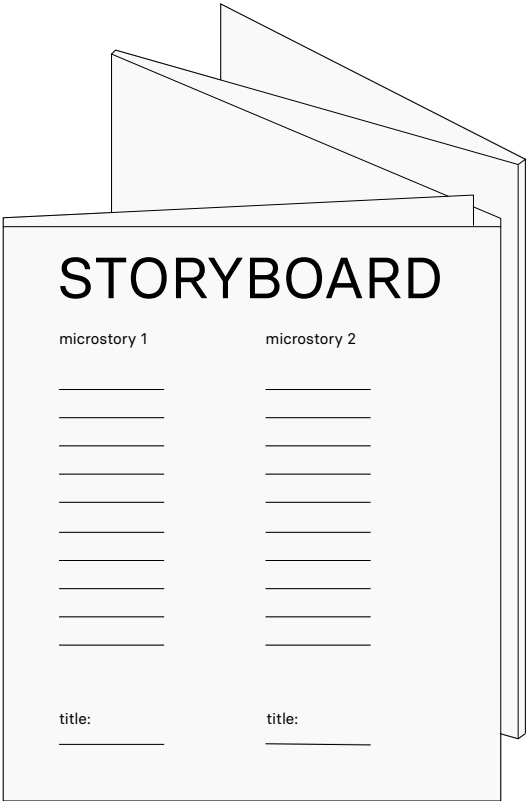


- 15 Character card

30 voting tokens



1 storyboard

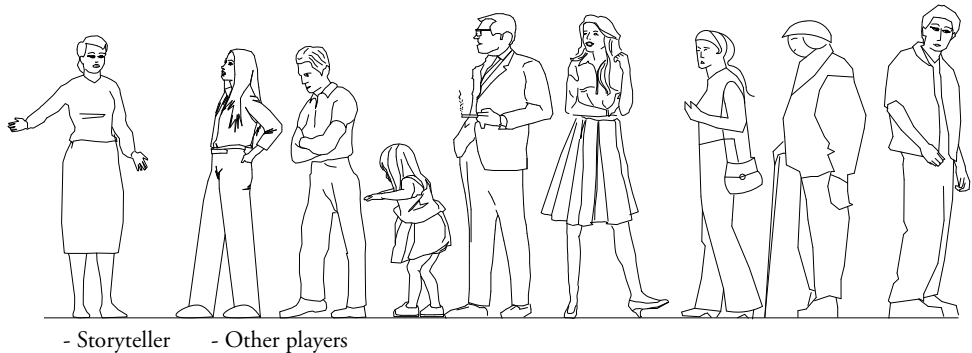


1 Uncertainty dice



- Occasion
- Constraint
- Unexpected
- Alliance
- Conflict
- Block

Players

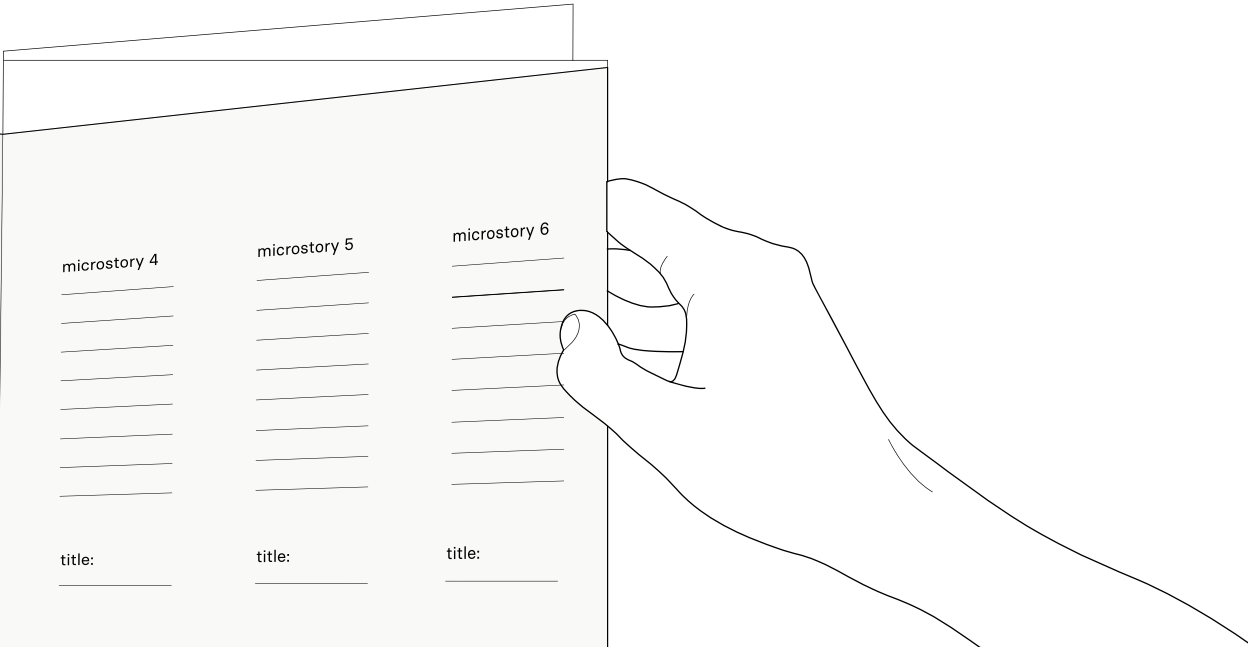


- Storyteller
- Other players

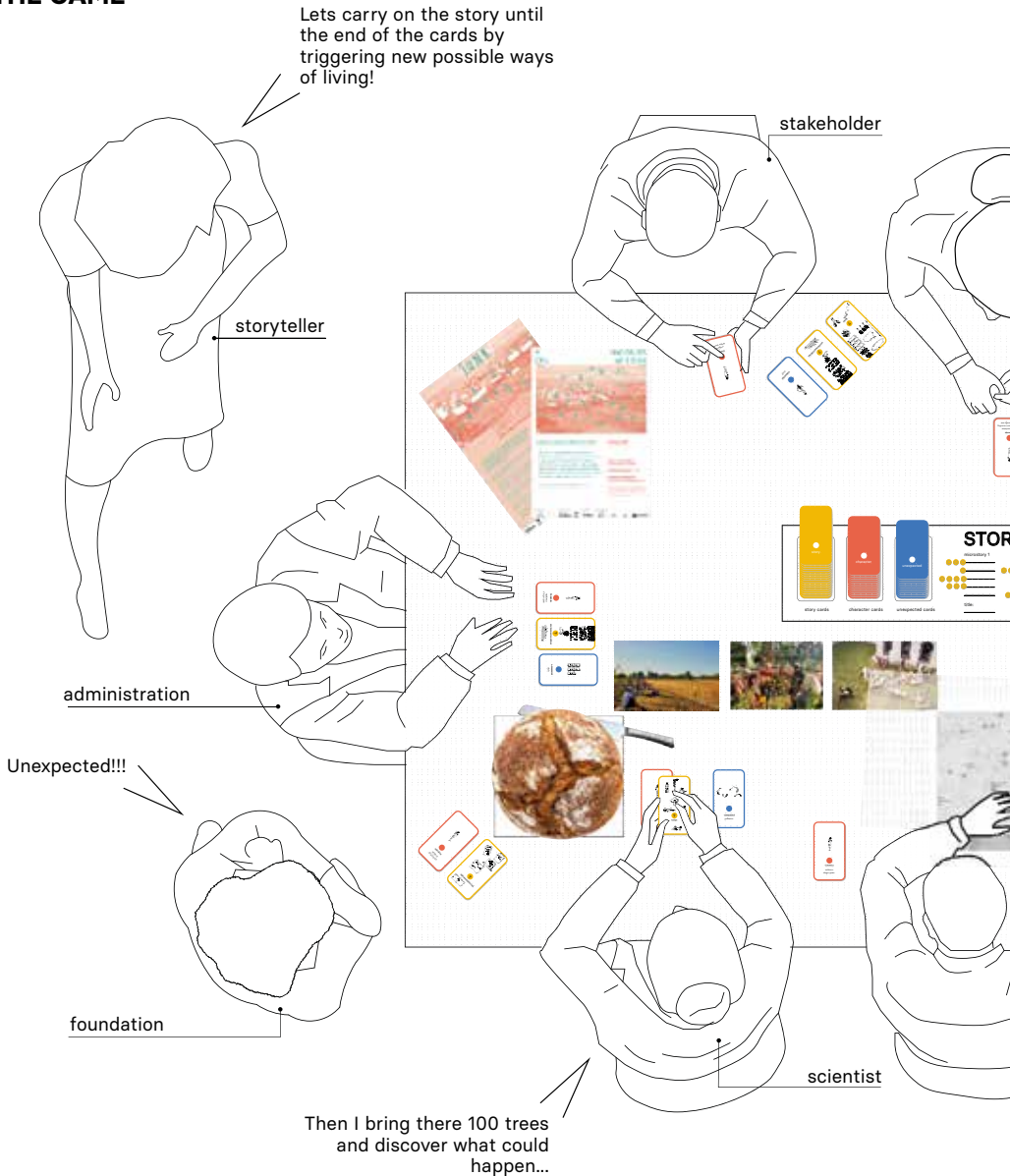
MOCKUP OF THE GAME



TENTATIVE



RULES OF THE GAME



Existing storytelling

Narrator

a. The storyteller writes down 3 words to tell the condition of the place, the story of the previous design tentative experience process, its effects, and the aim to pursue by this game.

Micro-story

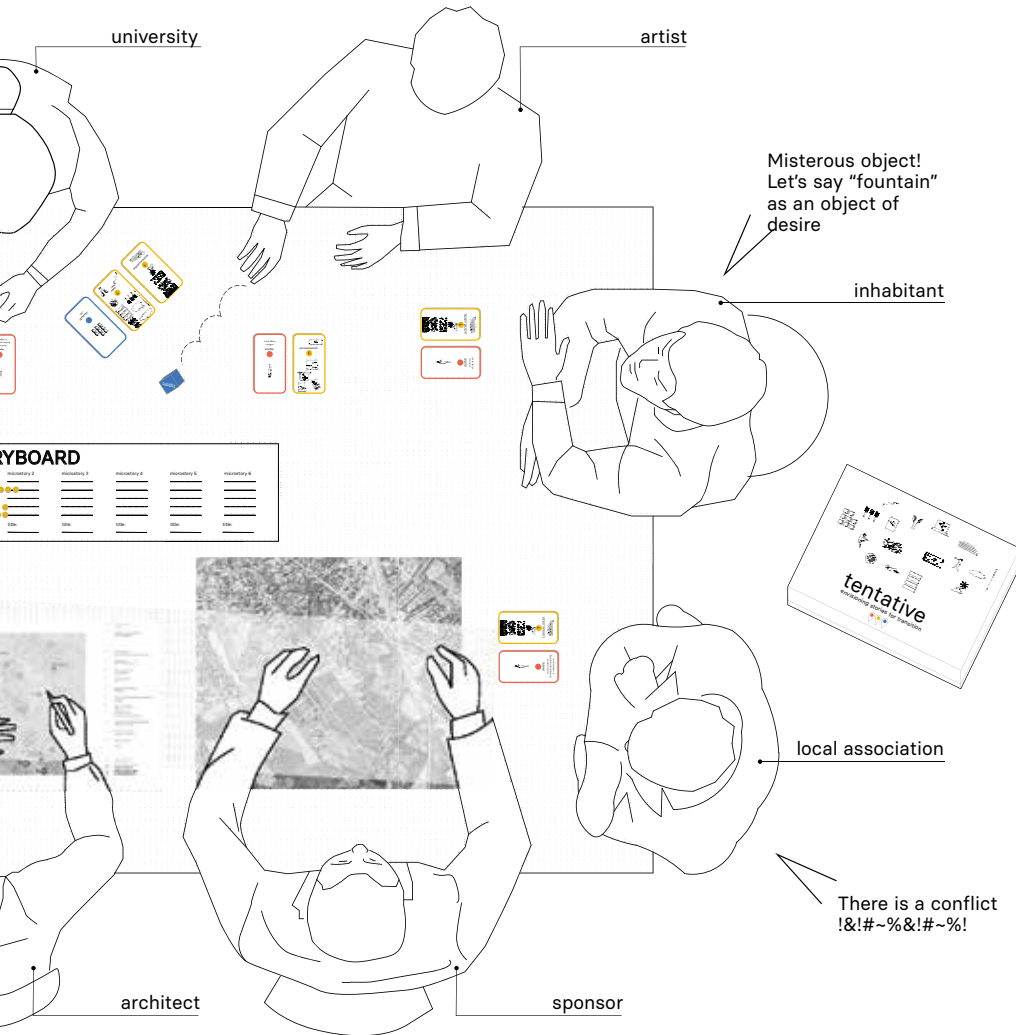
1st player

b. Draws a character card and become that character.
c. Draws a story card and writes down a word telling a story about that.

2nd player

d. Draws a character card and become that character.
e. Draws a story card and writes down a word telling a story about that.
6. Rolls the dice and reacts to the unexpected situation.

TENTATIVE



Other players

f. Make the same steps of the third one until all the character cards have been drawn.

Open discussion

All players

g. All the players discuss and vote the words they like most. The discussion is moderated by the 1st story teller.

h. The 3 words most voted become the starting point of the next micro-story.

Lets start another micro-story!



Game ends

The game ends and players together win if they keep telling stories until the last storyboard has been drawn.

Deventer municipality
building, The
Netherlands. Project
by Neutelings Riedijk
Architecten, realization
between 2013-2015.
Photograph by Roberto
Cavallo.



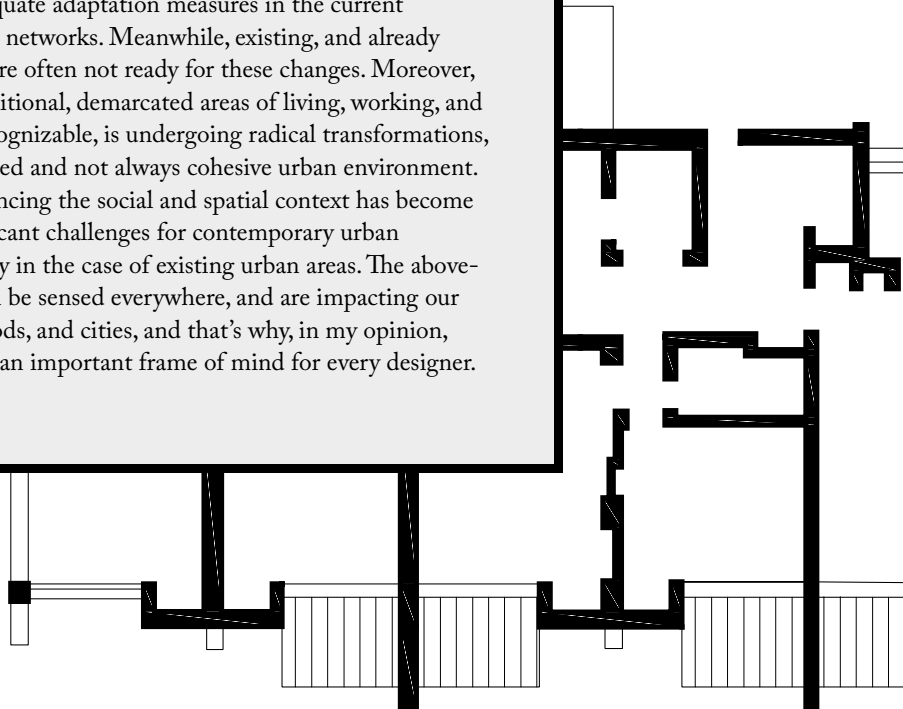
A MULTIFACETED INTERPLAY

ENVISIONING BUILT ENVIRONMENT TRANSFORMATIONS IN THE CONTEMPORARY URBAN CONTEXT

ROBERTO CAVALLO

Introduction

Our times are characterized by an ever-increasing complexity, even unpredictable changes are becoming almost a regular occurrence. Pressuring issues such as growing globalization, environmental and societal concerns, or dealing with uncertainties and sudden crises, require constantly adequate adaptation measures in the current cityscape and its urban networks. Meanwhile, existing, and already densified urban areas are often not ready for these changes. Moreover, the city, where the traditional, demarcated areas of living, working, and facilities were once recognizable, is undergoing radical transformations, resulting in a fragmented and not always cohesive urban environment. For these reasons, balancing the social and spatial context has become one of the most significant challenges for contemporary urban interventions, especially in the case of existing urban areas. The above-mentioned matters can be sensed everywhere, and are impacting our buildings, neighborhoods, and cities, and that's why, in my opinion, they should constitute an important frame of mind for every designer.



It is therefore not a coincidence that, given this framework, several scholars are reflecting on the various roles of design and designers, trying to identify suitable approaches to face these complex challenges. Within the purpose of this publication, it is worth mentioning, in a nutshell, a couple of interesting thematic inflows that in my view have a certain degree of complementarity. Such as focusing on design experiments meant to counteract rigid urban environments with the intent of enabling social interactions (Sendra and Sennet 2020). Or, while offering a glimpse into several design disciplines, provide insights on ways to pursue inclusive designs, emphasizing the process rather than the outcome (Braun et al. 2021). To conduct research interconnected with design for transition along with the matter of process, one cannot avoid considering the variety of features and specificities that characterize design. Therefore, the basic question for each designer is to develop and make explicit his position towards the peculiar aspects involved with the design that he/she wishes to pursue (Blythe and Stamm 2017). This requires also looking at the various aspects of the context in which the design is going to act or have an impact as essential steps in the design process. Altogether, we should strive for designs that, despite the succession of often heterogeneous transformations, can still offer steadfast solution pathways to the given tasks and, at the same time, respond to the underlying urban agenda. In order to fulfill this twofold role, the proposed design intervention must then act as a catalyst for further developments and serve as a unifying element in its urban site.

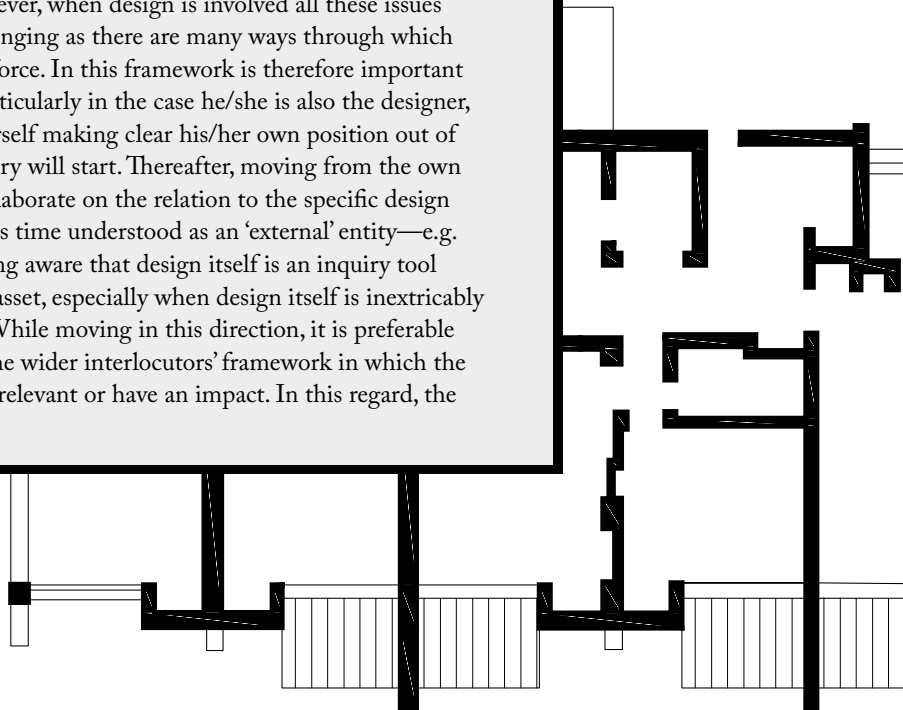
Design and context interactions

As stated here above, the interaction between design and context—here not only intended as a physical but also as a societal context—plays an important role. When focusing on spatial transformations of our cities, we should endeavor to unambiguous and sustainable anchoring between buildings, outside spaces, and urban environment. The mutual relationships between building and context can be achieved in different ways and scale levels, hereby I will mention just a few recurring options. For example, by strongly relating position, orientation and/

or approach route to the building (or part thereof) in relation to elements that are already present in the project area. In addition, the designer can create new important visual relationships between the building and the urban environment, interconnecting them in many ways. Relationships with the context can also be activated from the interior of the building, for example via spaces that are meant to work inside out and/or outside in. Moreover, the interaction with the context can be emphasized using certain materials and/or through the facade design. The above-mentioned forms of interaction between building and context are observable and therefore mainly physical. However, other, evenly strong, forms of interaction are conceivable. Even without physical connections, an intervention by means of its intent, program or meaning can have a strong relationship with the context. For example, the intervention may be inspired by or related to historical, social and/or societal events that are linked or took place on the site. Or it can have a strong connection to the identity (not just physical) of the location and its inhabitants.

Designer and context

When we talk about research, we should make clear what are the research questions and the relevant aspects, specify approach and methodology, and highlight the degree of novelty as well as the matter of transferability. However, when design is involved all these issues are getting more challenging as there are many ways through which design can come into force. In this framework is therefore important that the researcher, particularly in the case he/she is also the designer, contextualize him-/herself making clear his/her own position out of which the design inquiry will start. Thereafter, moving from the own realm, he/she should elaborate on the relation to the specific design matter and context, this time understood as an 'external' entity—e.g. the urban context. Being aware that design itself is an inquiry tool (Elkjaer 2009) can be asset, especially when design itself is inextricably linked with research. While moving in this direction, it is preferable to make explicit also the wider interlocutors' framework in which the research is likely to be relevant or have an impact. In this regard, the



interplay between personal position, motivations, and triggers with third-party stimuli or other exterior factors becomes crucial for the contextualization of the particular project.

Contextual designs; a set of practical guiding questions and some hints

As already mentioned before, different, and often heterogeneous transformations lead to fragmented and not always cohesive urban environments. Therefore, and more than ever, there is a need for designs that can respond to the lasting and sustainable characteristics of the urban context. It is essential to include these aspects very early in the design.

When facing an assignment, designers often dispose of several options to find an answer. During the process of thinking, it is always a battle between objective and subjective observations, thoughts, or elements. To me, one of the main aspects to work with is to strive for intervention proposals that require a response from other potentially involved people, which may eventually induce follow-up actions—the so-called catalyst effect. It goes almost without saying that it depends on the environment or context in which the design proposal can/should be acting and being discussed. The following questions may help in this respect: what are the (sustainable) characteristics of the specific site and its urban context? Are there already relationships between location and context that should (or could) strengthen the intervention? We should think here not only of physical relationships but also of other aspects related to the identity, and social as well as societal characteristics of the urban context. Are there undervalued or confusing features or other weaknesses in the context? Should the design respond to these issues? If yes, in which possible ways? Given the site and urban context, what would be a logical approach to the intervention? Keep track of your findings by means of sketches, drawings, other graphics, and textual notes.

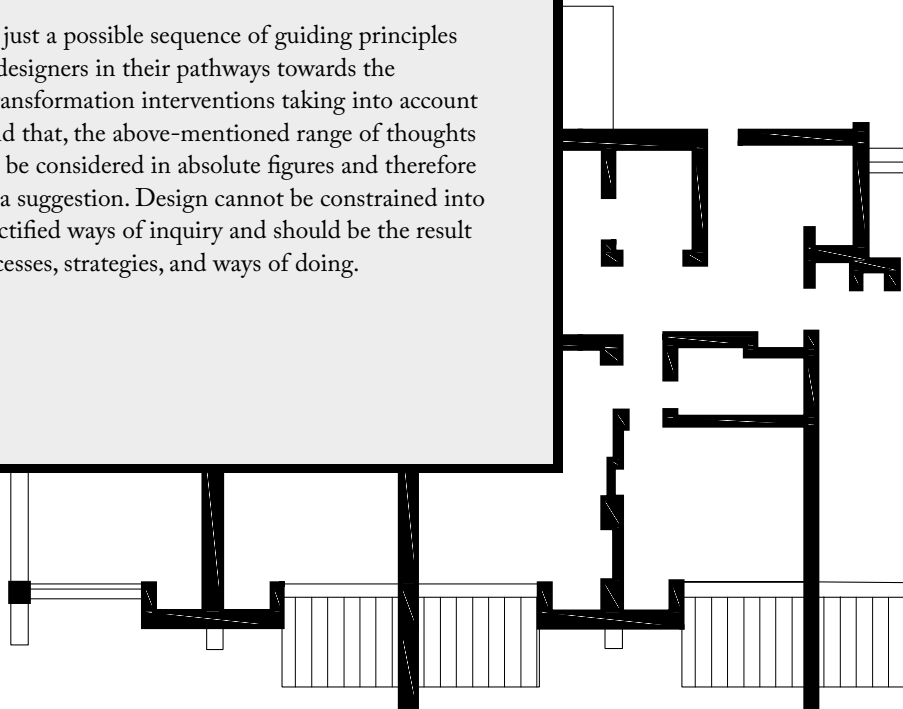
Going further with the design in relation to program and context, do you think the given program fits well in the context? Are relationships

desirable between (parts of) the program and the context? If yes, which design actions could enhance these aspects? To what size or scale level is the interaction between intervention and context desirable? How do you think you can achieve that and what design challenges may arise? Moreover, to what extent and in what ways should the design intervention be autonomous and/or dependent on the context?

What are the main parts of the given program? At this stage an analysis of the spatial and compositional aspects associated with the program should be made. Program wise, what are the most important spatial relationships between program parts? And is there anything you miss? In other words, do you think that (part of) the program is inadequate, or something is lacking?

In the case of a building design, are there relationships to be made between interior and exterior? Is continuity between inside and outside desirable? To what extent is the facade layout related to these principles? What materials are you proposing to make use of? Finally, how sustainable is the envisioned interventions? This point should be considered also in relation to the sustainable characteristics of the urban context. Sustainability must be tackled not only with regard to performance, environmental impact, or lifespan but also in terms of the intervention itself being suitable for fitting in the given context, physical and non-physical.

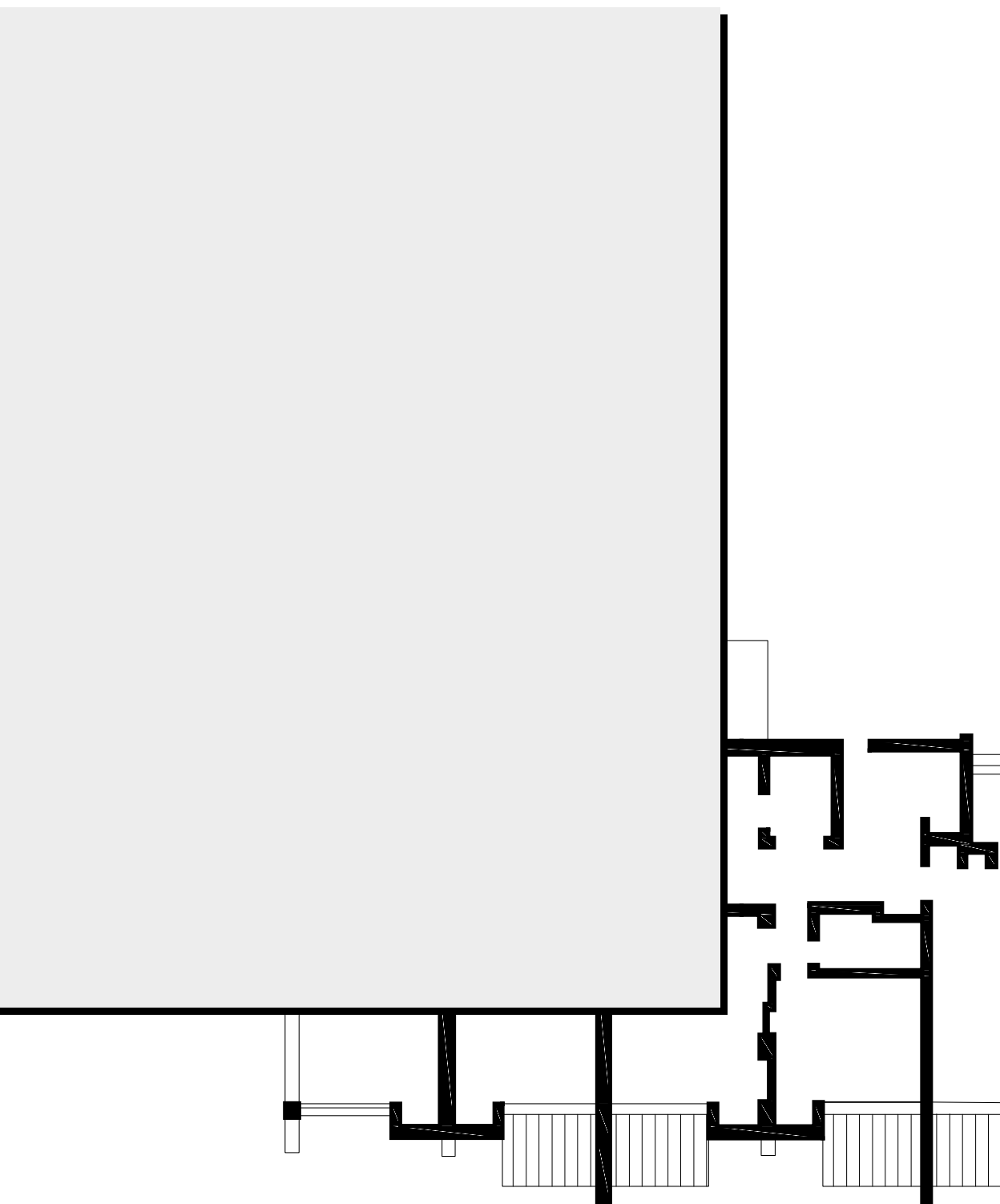
This set of questions is just a possible sequence of guiding principles that can possibly help designers in their pathways towards the envisioning of urban transformation interventions taking into account the context. Having said that, the above-mentioned range of thoughts and queries should not be considered in absolute figures and therefore should be seen only as a suggestion. Design cannot be constrained into unambiguous and objectified ways of inquiry and should be the result of specific creative processes, strategies, and ways of doing.



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A MULTIFACETED
INTERPLAY



The background of the entire page is an abstract architectural floor plan. It features a complex network of white lines on a solid red field, representing walls, corridors, and room divisions. The plan is symmetrical along a vertical axis. In the center, there is a large rectangular area. To the left and right of this central area are more complex, irregular shapes. At the top and bottom, there are horizontal bands with vertical lines, possibly representing staircases or structural elements. The overall effect is a high-contrast, geometric design that suggests a modern architectural style.

44 – 45

LO-TECH

**MODERN ARCHITECTURE
AND CLIMATE CULTURE**

**OLJER CARDENAS NIÑO
ALESSIA MACCHIAVELLO**

Tool | Design Anatomy

Along the analogy between architecture and anatomy and as Rafael Balboa specifies: "As much as architecture employs the section as a representing tool to understand spatial qualities, human anatomy employs dissection on the body as a research methodology", the instrument to dissect, describe and examine the membrane, is the Design Anatomy.

The human skin contains different structures, which by external factors develop different characteristics, to adapt to the surrounding conditions, as an example, the variations in human skin color are adaptive traits that correlate closely with geography and the sun's ultraviolet (UV) radiation. In the same way in architecture, there is a common idea that each culture creates its own specific elements to construct, responding to climatic conditions, location, and resources. This generates different solutions to analogous problems, forming a range of possibilities. Thus, the skin, the building envelope, has taken on different shapes, and thicknesses and uses different technologies that respond to these conditions.

The topic is defined by two types of perimeters: the first of a typological nature, specifying housing, and the second of a geographical one, working in two different locations, India (Asia) and Mozambique (Africa), both tropical countries.

The structures that we want to analyze—threshold, comfort and visual—are here dissected into different elements that allow to classify and compare the different solutions applied in the selected case studies. Each category, in turn, is unpacked into several sub-categories to enable a comprehensive and detailed review of the solutions adopted.

The climate crisis affecting contemporary global society underscores the need for a reflection on design systems. As Buckminster Fuller exposed how systemic crises are not directly attributable to resources scarcity, but rather to a lack of design (Fuller and McHale 1963, VII), later also Tomás Maldonado identifies design hope as a necessity, not only for the figure of the architect but more generally for the role of the project (Maldonado 2017, 82). In this context, Lo-Tech architecture exemplifies a clear interpretation of how the project solves with design thinking. Lo-Tech is one of many abbreviations of the term low technology and connected to his etymological meaning it is *"a simple, unsophisticated, uncomplicated, and primitive technology... pre-dating the industrial revolution"* (Watson 2020, 20), Lo-Tech techniques or systems use traditional or non-mechanical technology. It is the opposite of high-tech, which is a term for relatively new technology that incorporates advanced features. Lo-Tech can be also considered a design approach to understanding vernacular architecture, and structural systems that generate sustainable and climate-adapted infrastructures. As an example, this type of approach to the design process can be found in the projects carried out by different modern architects who worked in tropical areas (Fry and Drew 1947), leaving a variety of solutions that we can study today to face the current crisis.

Lo-Tech and the influence of geography

Lo-Tech design solutions are directly related to the site in which the project takes place, determined in various ways: form, materiality, and architecture configuration. As can be detected in the

work of Alexander von Humboldt, there is a direct dependence between the interactions of geographic agents (climate, localization, etc.), human activities and culture, which generates a certain way of structuring the territory, and in our case constructing architecture. In this frame, Lo-Tech solutions may vary depending on the region of the world in which you are located, as an example, Amancio d'Alpoim Miranda Guedes and Pierre Jeanneret are two architects who understood the environment, culture and climate and designed Lo-Tech buildings, the first one, in Mozambique and the second one, in India.

Breathing membranes

When looking at Guedes and Jeanneret work, it is possible to identify a Lo-Tech approach, principally in the envelope of the buildings, because it's the thin membrane that separates us, covers us, protects us from the inclemency of nature: *"is that surface which interacts with the world at large. The membrane has a responsibility to protect the contents... It also makes a statement to the greater world about the building, a statement that connects the form and function of the building"* (Holliss 2017).

Literature has demonstrated that there is a link between the building membrane and climate and how: *"in the current scenario of massive urbanization and global climate change, the urban surfaces and their characteristics have a key role, as they significantly influence the quality of life in urban areas, as well as their environmental conditions [...]. These include the horizontal and vertical surfaces of the ground and the building envelopes, which can be characterized by different materials and can host several*

functions." (Croce and Vettorato 2021). The development of these membranes in the works of Guedes and Jeanneret are affronted from the beginning of the design process, resulting in buildings that use Lo-Tech technics that can be clearly characterized and identified. First, threshold is defined as the urban and architectural relation of the building between inside and outside. Second, comfort is intended as a physical aspect related to the ambient qualities. For last, visual, meaning the esthetic and perceptive qualities. Therefore, the three characteristics of the membrane are used as a way of describing the spatial structure of built-up areas that help in a transition process, as defined by Stamatina Kousidi, "*the envelop as a complex architectural system... with knowledge deriving from the sciences, with the changing climatic conditions*" (Kousidi 2020, 33).

Threshold

Threshold is a space of mediation between the city and the interior of the building, without this film the street does not exist, as Louis Khan expressed: "*The street is a room by agreement. A community room the walls of which belong to the donors, dedicated to the city for common use*" (Monteys 2018, 8). This dichotomy, between inside and outside, makes the threshold a three-dimensional element that helps to mediate public and private relations and that influences the character of open space. This relationship means that interventions into the public, it can result in changes in the architecture of the façade and vice versa providing a platform for the open space realm.

Comfort

Lo-Tech design is connected to materiality, but also with orientation, which affects the interior comfort of the building. Passive ventilation systems and sun protection elements are some of the solutions that impact thermal efficiency. The membrane of the building is transformed as interacts with the environmental situation, becoming a spatial place, that helps with the performativity of the element as David Leatherbarrow and Mohsen Mostafavi claim, "*The autonomy of the surface, the 'free façade', presumes a distinction between the structural and nonstructural elements of the building, between the frame and the cladding*" (Leatherbarrow and Mostafavi 2005, 8).

Visual

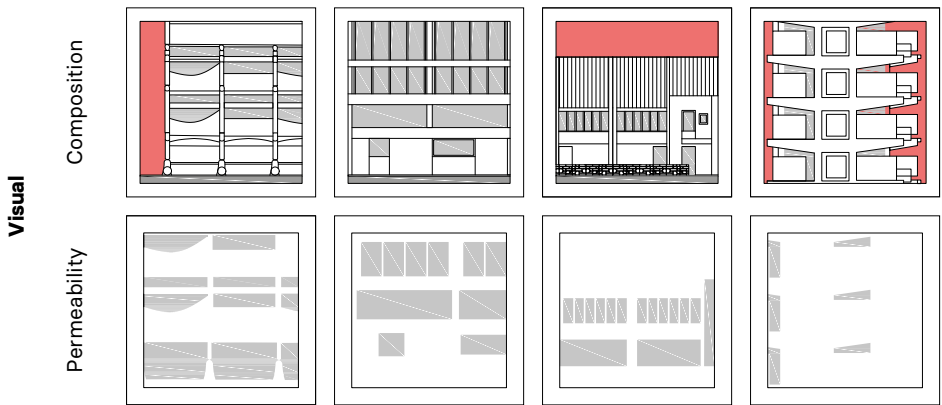
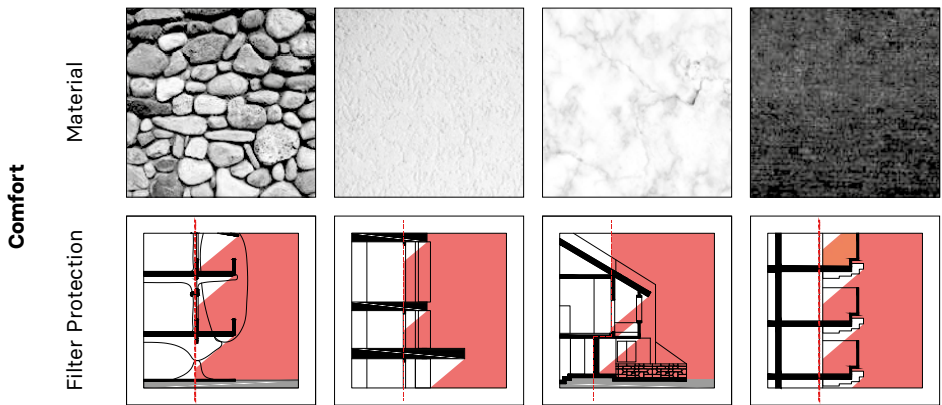
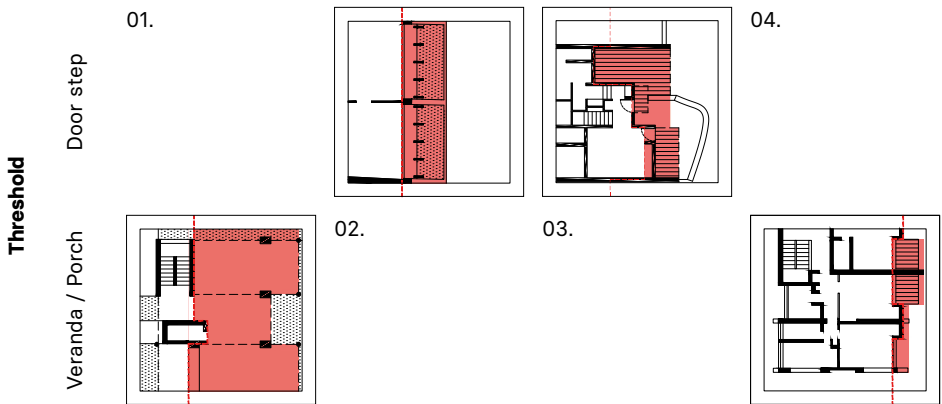
As Finnish architect Pallasmaa noted almost a quarter of a century ago in his influential work "*The eyes of the skin. Architecture and the senses*", architects have traditionally designed primarily for the eye of the beholder. The envelope is the building's outer skin, the cover of it, but, at the same time is the connection element to the city, it must make sense in both roles at once, as also David Leatherbarrow and Mohsen Mostafavi said: "*The properties of a building's surface—whether it is made of concrete, metal, glass, or other materials—are not merely superficial; they construct the spatial effects by which architecture communicates. Through its surfaces a building declares both its autonomy and its participation in its surroundings.*" (Leatherbarrow 2005, 8)

Finally, the reflection on how Guedes and Jeanneret interpreted the Low-Tech system of the vernacular architecture

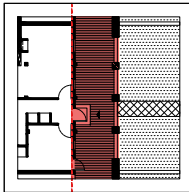
and used in their buildings can display a potential actualised approach, in which the needs related to climate crisis can be translated into opportunities for the project.

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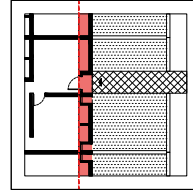
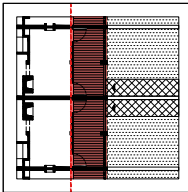
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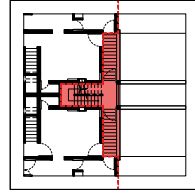
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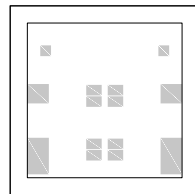
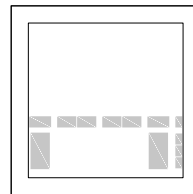
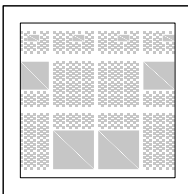
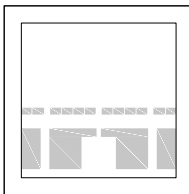
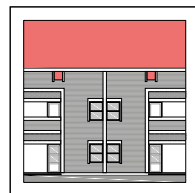
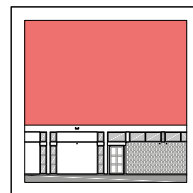
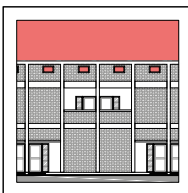
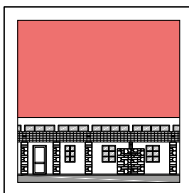
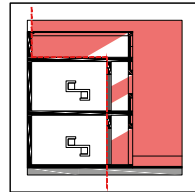
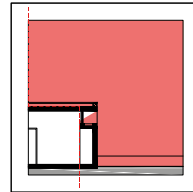
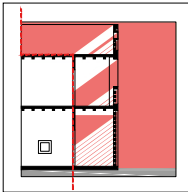
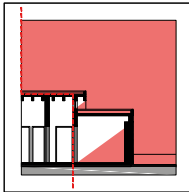
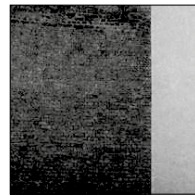
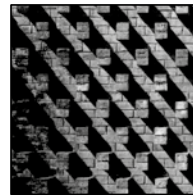
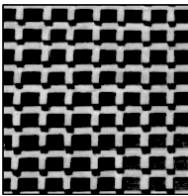
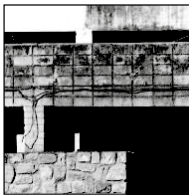
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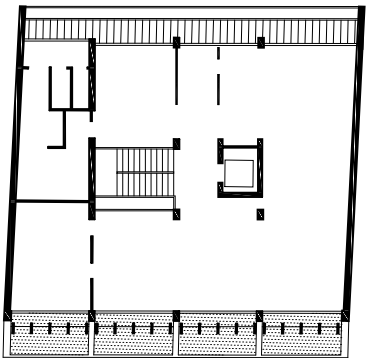
08.



01.

Smiling Lion
Maputo, Mozambique
1956
Amancio d’Alpoim Miranda Guedes

Floor Plan



View of the Verandah

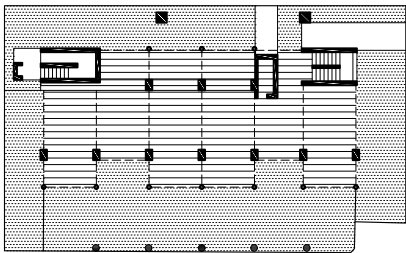


Threshold:	Door Step	
	Verandah	+++
Comfort:	Material	++++
	F. Protection	+++++
Visual:	Composition	+++++
	Permeability	+++

02.

Mann George
Maputo, Mozambique
1954
Amancio d’Alpoim Miranda Guedes

Floor Plan



View of the Door step



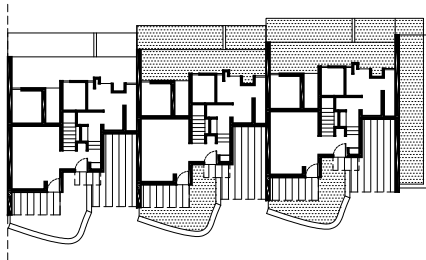
Threshold:	Door Step	++
	Verandah	
Comfort:	Material	+++
	F. Protection	+++++
Visual:	Composition	+++
	Permeability	+++

03.

Doze Casas
Maputo, Mozambique
1954
Amancio d'Alpoim Miranda Guedes

Floor Plan

0 1 2 3 4 5



View of the Door step



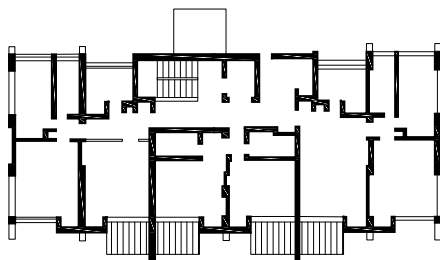
Threshold:	Door Step	++++
	Verandah	
Comfort:	Material	++++
	F. Protection	+++
Visual:	Composition	++++
	Permeability	+++

04.

Prometheus
Maputo, Mozambique
1951
Amancio d'Alpoim Miranda Guedes

Floor Plan

0 1 2 3 4 5



View of the Verandah

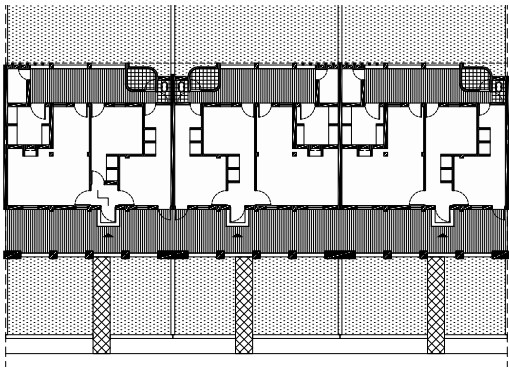


Threshold:	Door Step	
	Verandah	+++
Comfort:	Material	++++
	F. Protection	++++
Visual:	Composition	++++
	Permeability	++

05.

House Type T10-JD
Chandigarh, India
1956
Pierre Jeanneret

Floor Plan



View of the Verandah

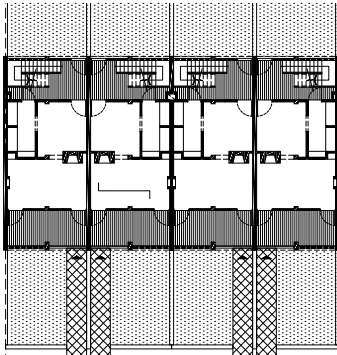


Threshold:	Door Step	
	Verandah	++++
Comfort:	Material	+++++
	F. Protection	++++
	Visual:	
Visual:	Composition	++++
	Permeability	+++

06.

House Type T10-JB
Chandigarh, India
1956
Pierre Jeanneret

Floor Plan



View of the Verandah

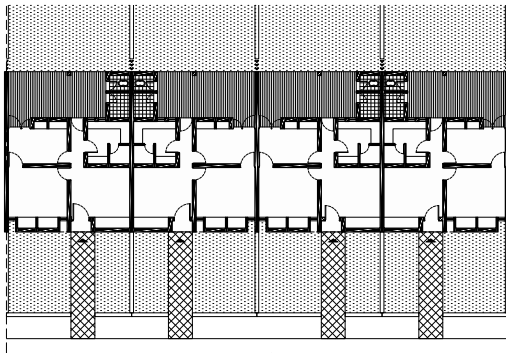


Threshold:	Door Step	
	Verandah	+++++
Comfort:	Material	++++
	F. Protection	+++++
	Visual:	
Visual:	Composition	+++++
	Permeability	++++

07.

House Type T11-JB
Chandigarh, India
1958
Pierre Jeanneret

Floor Plan



View of the Door step

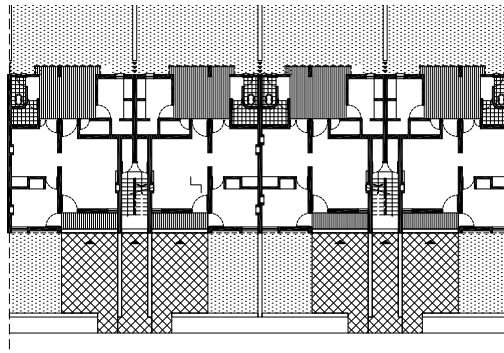


Threshold:	Door Step	+++
	Verandah	
Comfort:	Material	++++
	F. Protection	+++
	Visual:	
Visual:	Composition	+++
	Permeability	++

08.

House Type T11-JD
Chandigarh, India
1961 - 1966
Pierre Jeanneret

Floor Plan

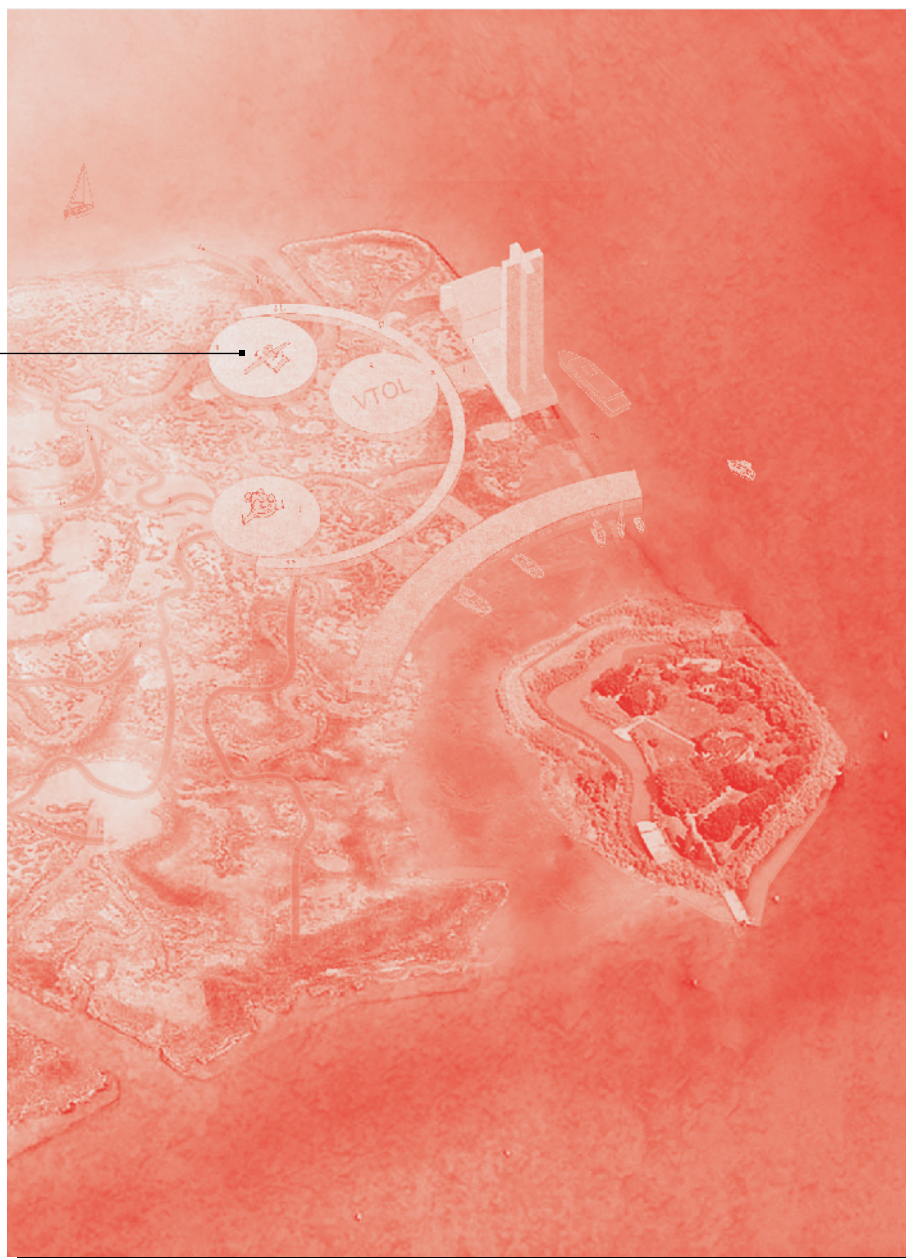


View of the Door step / Verandah



Threshold:	Door Step	++++
	Verandah	
Comfort:	Material	++++
	F. Protection	++++
	Visual:	
Visual:	Composition	++++
	Permeability	+++

The vertiport is an infrastructure, a landscape, and a place of sea-air interchange. Design by Alessandro Rocca, Giulia Setti, Gino Baldi.

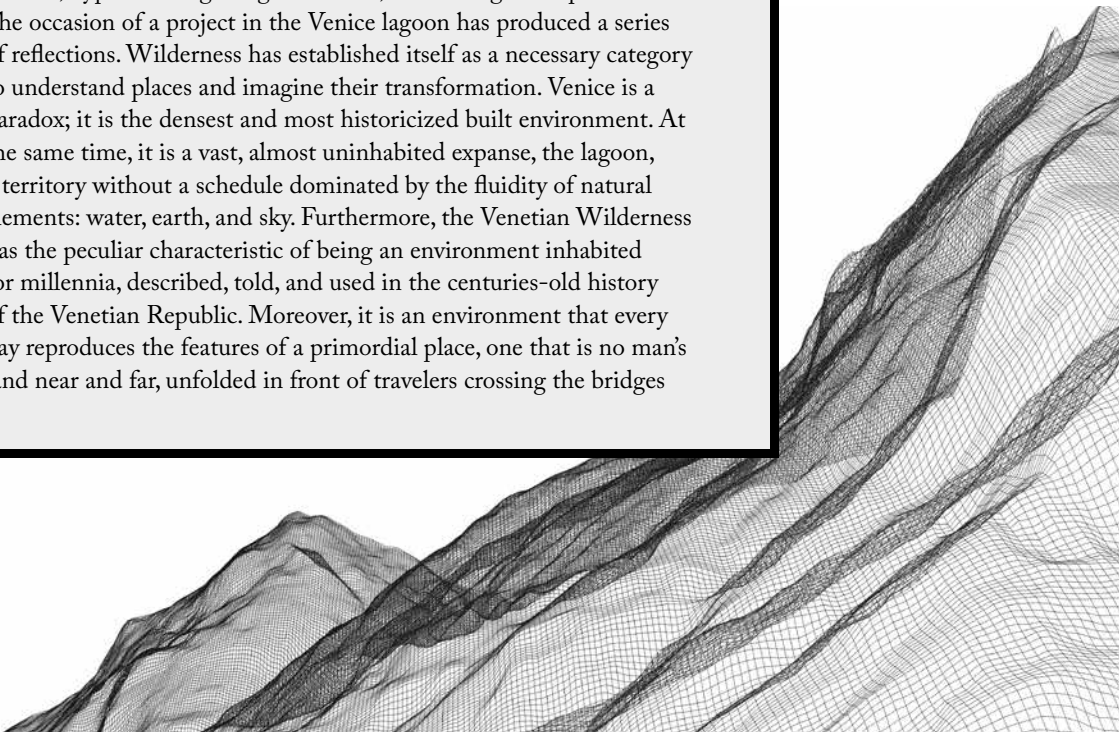


WILDERNESS: THE LAGOON AS AN INFRASTRUCTURE

ALESSANDRO ROCCA

“Abstraction is the basis of the conceptual thinking. When we abstract from a situation, we select certain factors as key; we discover in a simple and finite set of relations the essence of the infinitude of relations that contained them” (Kepes 1956, 29).

Discussing Wilderness in architectural terms requires choosing a context, hypothesizing the game’s rules, and setting some parameters. The occasion of a project in the Venice lagoon has produced a series of reflections. Wilderness has established itself as a necessary category to understand places and imagine their transformation. Venice is a paradox; it is the densest and most historicized built environment. At the same time, it is a vast, almost uninhabited expanse, the lagoon, a territory without a schedule dominated by the fluidity of natural elements: water, earth, and sky. Furthermore, the Venetian Wilderness has the peculiar characteristic of being an environment inhabited for millennia, described, told, and used in the centuries-old history of the Venetian Republic. Moreover, it is an environment that every day reproduces the features of a primordial place, one that is no man’s land near and far, unfolded in front of travelers crossing the bridges



connecting with the mainland and in front of the windows of the houses and hotels of Cannaregio or Giudecca. In the lagoon, the duality that opposes the city to the countryside (Corboz 2001) changes into a different dialectic where the main opposition is the one that separates the emerged land from the submerged one, divided by a very labile borderline, in constant movement.

For architecture, the unique beauty of the ancient city is a problem, and, over the decades, Venice has been one of the most difficult challenges. It isn't easy to compete with a city so intensely architectural, finite, and defined in its historical stratification. Some masters drew without building, such as Frank Lloyd Wright, with the headquarters for the Masieri foundation; Le Corbusier, with the project for a new hospital; Louis Kahn, with the Palace of Congresses. Others, on the other hand, have included works created in the historical fabric of the city: Italian architects such as Ignazio Gardella, Vittorio Gregotti, Gino Valle, Cino Zucchi, and foreign architects, such as Tadao Ando, at the Punta della Dogana, and Rem Koolhaas, in the Fondaco dei Tedeschi. But above all, the lesson of Carlo Scarpa stands out who uniquely translated an exact idea of Venetianism into equally precise and memorable works such as, above all, the headquarters of the Querini Stampalia Foundation. Beyond the absolute value of the city-museum, there is another equally important point of exception: the perfection of the opposites. Venice is the most artificial city in the world, a single architecture that rests on thousands of pilings, suspended over the water of the lagoon, a flat world with a vanishing shape, a liquid desert mostly impractical and uninhabited.

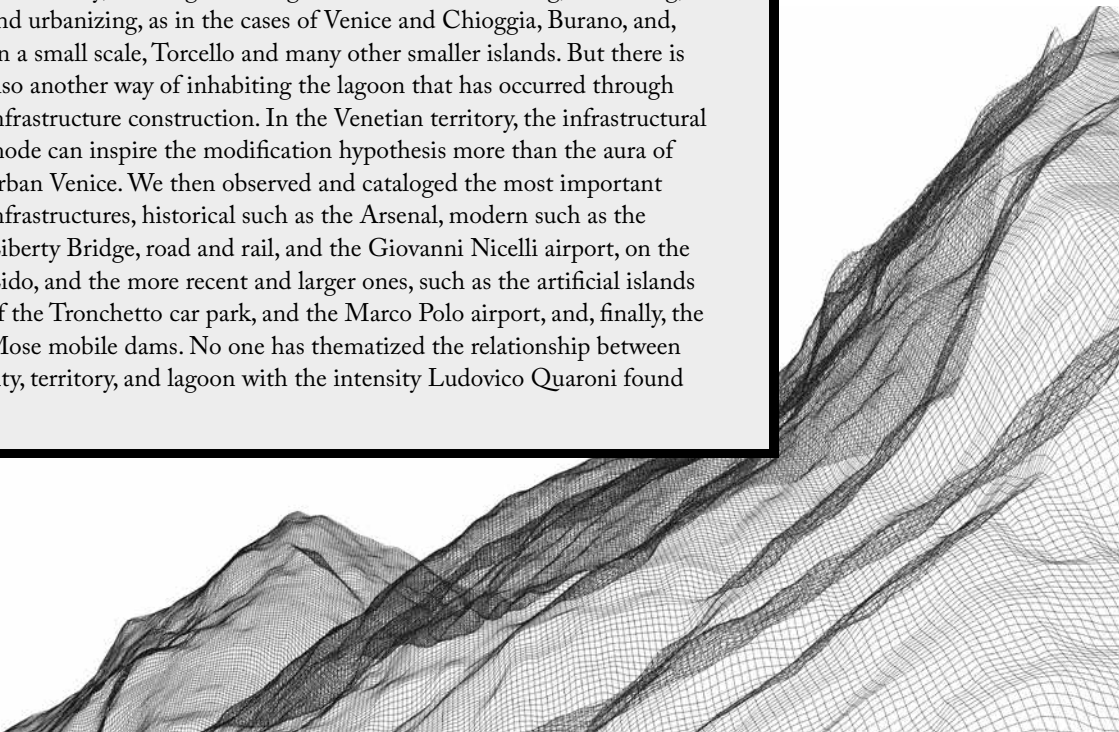
In the lagoon, islands stay like oases; they are inhabited, sometimes densely urbanized, and some, like Burano, are small towns. But the natural character of a rare, complex landscape largely dominates. To study it requires an *ad hoc* terminology, a specialized glossary unknown to those who aren't experts on the subject. The *Barene* are sandbanks, flat islands that can periodically be wholly submerged; the *Velme* are mudflats, very shallow waters that, during low tide, emerge, forming islands utterly devoid of vegetation. The *Motte* are mainly out of the water and have plants; the *Ghebi* are small natural channels that cross

the salt marshes connecting the main canals and feed the *Chiari*, pools of water in the internal depressions of the sandbanks. “The beauty of the Venetian lagoon resides in this becoming of one another between water and land, and other natural forces” (Santanicchia 2019, 205) a mixture of duplicity and ambiguity between land and water, which we can be interpreted as a model of coexistence non-binary and symbiotic: “there is no duality, no clear borders, but rather multiple systemic, holistic, dynamic forces that operate in a state far from equilibrium: Earth’s cyclical process of life” (Santanicchia 2019, 205).

The two-dimensional character of the lagoon produces a distorting effect on physical perception. The landscape becomes a graphic translation, a moving diagram of virtual, n-dimensional territory.

“When a figure is an irregular three-dimensional form—like the body of a human being—we are not confused or led astray by the shifting contour that never remains the same for a moment. We are made to see these endlessly changing aspects in persistent forms” (Kepes 1956, 29). In the lagoon, this same process occurs in two dimensions, asking the imagination to abstract and fix a landscape where the visual and physical instability of the contours is the essential feature.

In the project for the Burano Vertiport, we followed the idea of establishing a formal structure, making it persistent, without distorting the atmospheric and visual characteristics of the salt marsh. Historically, building in the lagoon has meant colonizing, reclaiming, and urbanizing, as in the cases of Venice and Chioggia, Burano, and, on a small scale, Torcello and many other smaller islands. But there is also another way of inhabiting the lagoon that has occurred through infrastructure construction. In the Venetian territory, the infrastructural mode can inspire the modification hypothesis more than the aura of urban Venice. We then observed and cataloged the most important infrastructures, historical such as the Arsenal, modern such as the Liberty Bridge, road and rail, and the Giovanni Nicelli airport, on the Lido, and the more recent and larger ones, such as the artificial islands of the Tronchetto car park, and the Marco Polo airport, and, finally, the Mose mobile dams. No one has thematized the relationship between city, territory, and lagoon with the intensity Ludovico Quaroni found

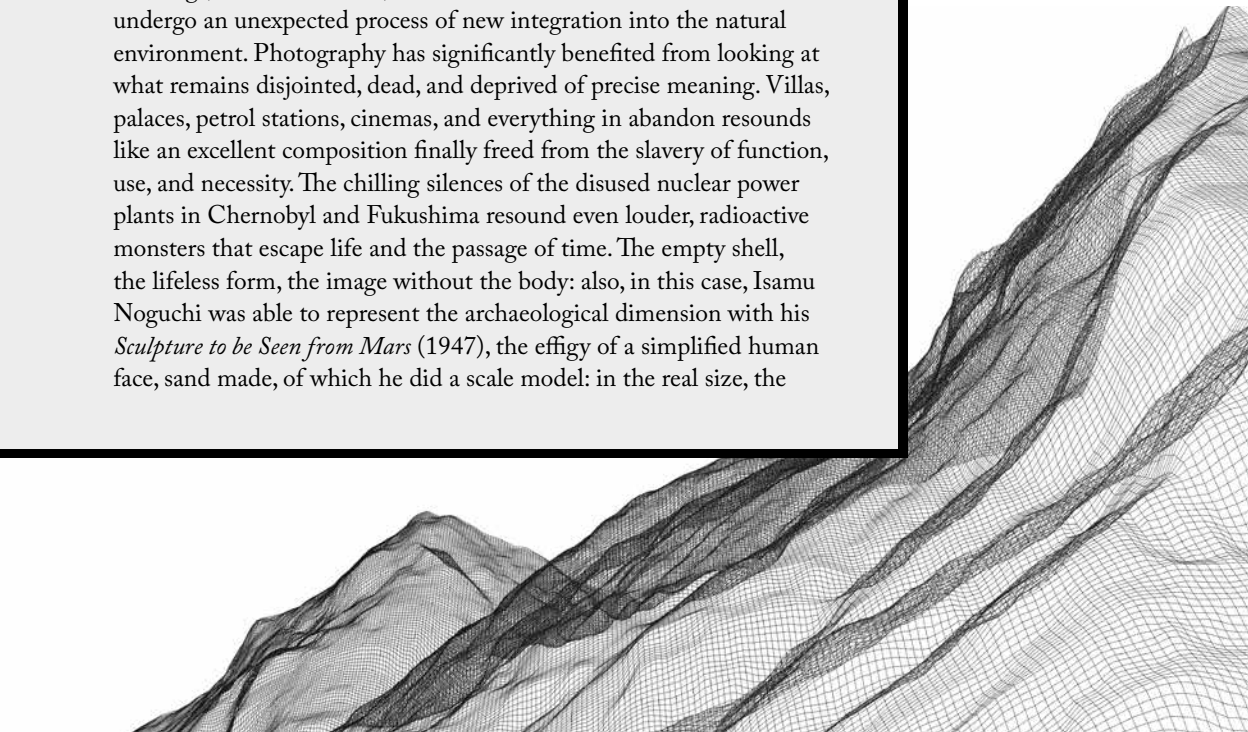


in the conception of the Cep residential district at the Barene di San Giuliano area, in Mestre (1958-59). The project, set in the history of Italian architecture as a milestone, represents a concrete utopia, the transformation of the territory into a built form, and offers a series of specific insights that often go beyond the mere destination of spaces. For example, formalism is so explicit that it is complicated to recognize the scale of drawings and models. The project is a piece of the city made up of large geometric shapes, the hemicycles that even reach 400 meters in diameter, in which the design of the void determines the character of the settlement. The Quaronian concept certainly owes a lot to Kevin Lynch and György Kepes (Del Monaco 2013, 174) and is related to other projects more decidedly oriented to the landscape and infrastructural dimension. And it is perhaps through that same matrix that generated the Robert Morris Observatory, realized in Flevoland, the Netherlands, between 1971 and 1977. Consisting of an ample circular space accessible through narrow openings in the barrier that encloses it, the room is duplicated in the outer belt by a continuous ambulatory delimited by a relief in the form of a dune. The grass cover softens the plastic effect, which is instead strengthened in the black and white images and is even stronger in the planimetric drawing. The geometric correspondences let us imagine the exactness of the spatial concept.

We find a similar approach in the work of Isamu Noguchi, the artist able to define a space only by controlling its physical and material characteristics, that is, completely independent of its possible uses. The courts designed by Noguchi, together with Gordon Bunshaft, for the Lever House (1951-53), Chase Manhattan Plaza (1956-1964), and the Yale Beinecke Library (1960-63), represent three interpretations of the garden based on the dialogue between stone and water, where the central element of a contemplative and dynamic space is the ground (Matsugi 2012). Less architectural is the California Scenario project (Costa Mesa, 1979-82), a patchwork that combines six Californian environments in a rather mechanical way: Forest Walk, Land Use, Desert Land, Water Source, Water Use, and Energy Fountain. Therefore, the garden is the accidental result of a paratactic

juxtaposition of six symbolic and synthetic installations that allude to six Californian landscapes. The garden is warm and sunny, as California is, and Noguchi was criticized for the lack of attention to the visitors' comfort. The place offers little shade, no seat, and a strong sense of disorientation and vertigo due to the representation of the landscapes, which combines miniaturized elements with more architectural or symbolic ones. The effect of vague discomfort arises, for example, by observing that the miniature canyon carved into a rustic pavement is crossed by a stream of water that flows from a stone cube driven into the ground but perfectly shaped and smoothed. The coexistence of artificial and natural materials, rustic and noble treatments, and Euclidean and organic geometries also produces alienating effects in other parts of the project. For example, in the tiny sloping lawn, like a stage, towards the observer, or the desert clod of perfectly circular shape leaning against the high continuous wall separating the garden from the parking lot.

Surfaces, volumes, and compositions that appear devoid of use and even of meaning reveal a certain plastic and landscape force. The most evident example of this expressive energy is found in ruins, in the archaeological remains full of indecipherable memories, such as the ancient Ball Court of Monte Alban, in the Oaxaca region of Mexico, and the modern ruins in Nuremberg and Detroit. In abandoned buildings, in desolate areas, the traces of human transformation undergo an unexpected process of new integration into the natural environment. Photography has significantly benefited from looking at what remains disjointed, dead, and deprived of precise meaning. Villas, palaces, petrol stations, cinemas, and everything in abandon resounds like an excellent composition finally freed from the slavery of function, use, and necessity. The chilling silences of the disused nuclear power plants in Chernobyl and Fukushima resound even louder, radioactive monsters that escape life and the passage of time. The empty shell, the lifeless form, the image without the body: also, in this case, Isamu Noguchi was able to represent the archaeological dimension with his *Sculpture to be Seen from Mars* (1947), the effigy of a simplified human face, sand made, of which he did a scale model: in the real size, the



nose should have measured a mile. A sculpture imagined as a legacy capable of surviving the disappearance of the whole of humanity. Noguchi's ability to build, engrave, and shape the soil finds an application above all in the series of playgrounds and sculpture parks, for the most part, unbuilt, including New York's Riverside Park (1961–66), for which he collaborated with Louis Kahn in the drafting of five different versions. The extension, the continuous surface, and the raw material of the flooring produce landscape architecture according to the typical conditions of the infrastructure.

Infrastructure

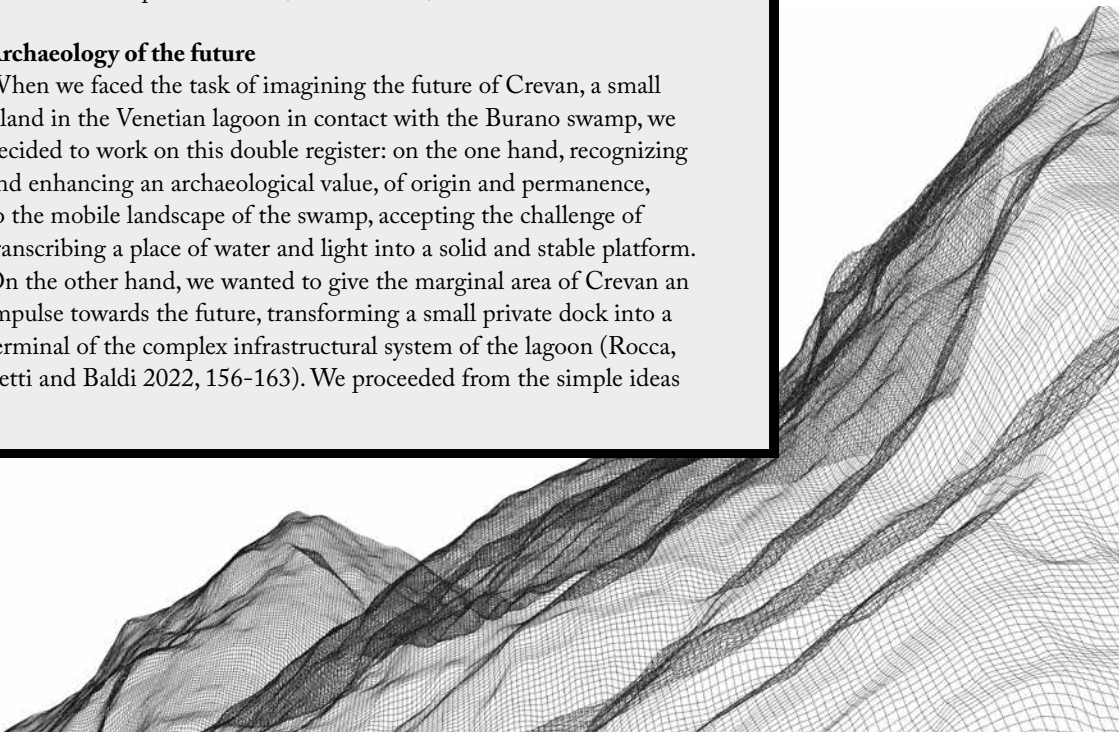
Highways, airports, and ports have this extensive horizontal development that pushes the architectural scale to coincide with the landscape; they alternate artificial, rough, reflective materials, such as concrete, asphalt, and iron, and natural elements, such as grass and water.

In the parkways, the vegetation is a constituting part of the infrastructure. Along highways, railway tracks, and airports, the vegetation is a factor of potential disturbance and interference with the safety of the routes and vehicles' movement in terms of surface maintenance and visibility. In the vast meadows surrounding the runways, often densely populated by rabbits and other small rodents, the presence of any vegetation that exceeds a few centimeters in height is not allowed. Gardeners must carefully contain the oleanders or the photinia hedges at the center of the Italian motorway carriageways in their foreseen dimensions. The trees that grow spontaneously along the railway embankments, such as *Robinia pseudoacacia* and *Ailanthus*, must be kept at a distance from the trains in transit. In the ports, a dense population of fish and birds gather, the species best suited to withstand polluting factors and more ready to take advantage of the vast production of waste that always accompanies the presence and the activities of the mankind. This duplicity of artificial and natural is typical of the infrastructure, of the non-urban character that allows it to find this dual relationship in its most explicit expression, without the mediation, the buffer zone, of a possible context.

For this type of project, the term Infrastructural Urbanism was conceived, which “understands architecture as material practice—as an activity that works in and among the world of things, and not exclusively with meaning and image. It is an architecture dedicated to concrete proposals and realistic implementation strategies and not distanced commentary or critique” (Allen 1999, 52.) The intense relationship with the natural environment, without mediation, is accompanied by a leap in scale, intensity, performance, possibilities, and the objectives for which the infrastructure is built. Infrastructure is the premise of a different future, acceleration, and pact between man and nature. In Venice, nothing demonstrates the value of this pact better than the Mose. This mobile dam system represents the latest update of a series of technical devices that, for millennia, have allowed humans to inhabit the lagoon. “Infrastructure prepares the ground for future building and creates the conditions for future events. Its primary modes of operation are the division, allocation, and construction of surfaces; the provision of services to support future programs; and the establishment of networks for movement, communication, and exchange” (Allen 1999, 54.) Radical explorations of this concept are projects such as Cannaregio Town Square (1978) by Peter Eisenman, the various elaborations of No-Stop City (1970) by Archizoom, and the Supersuperficie, a video presented by Superstudio at the New Italian Landscape exhibition (MoMA 1972).

Archaeology of the future

When we faced the task of imagining the future of Crevan, a small island in the Venetian lagoon in contact with the Burano swamp, we decided to work on this double register: on the one hand, recognizing and enhancing an archaeological value, of origin and permanence, to the mobile landscape of the swamp, accepting the challenge of transcribing a place of water and light into a solid and stable platform. On the other hand, we wanted to give the marginal area of Crevan an impulse towards the future, transforming a small private dock into a terminal of the complex infrastructural system of the lagoon (Rocca, Setti and Baldi 2022, 156-163). We proceeded from the simple ideas

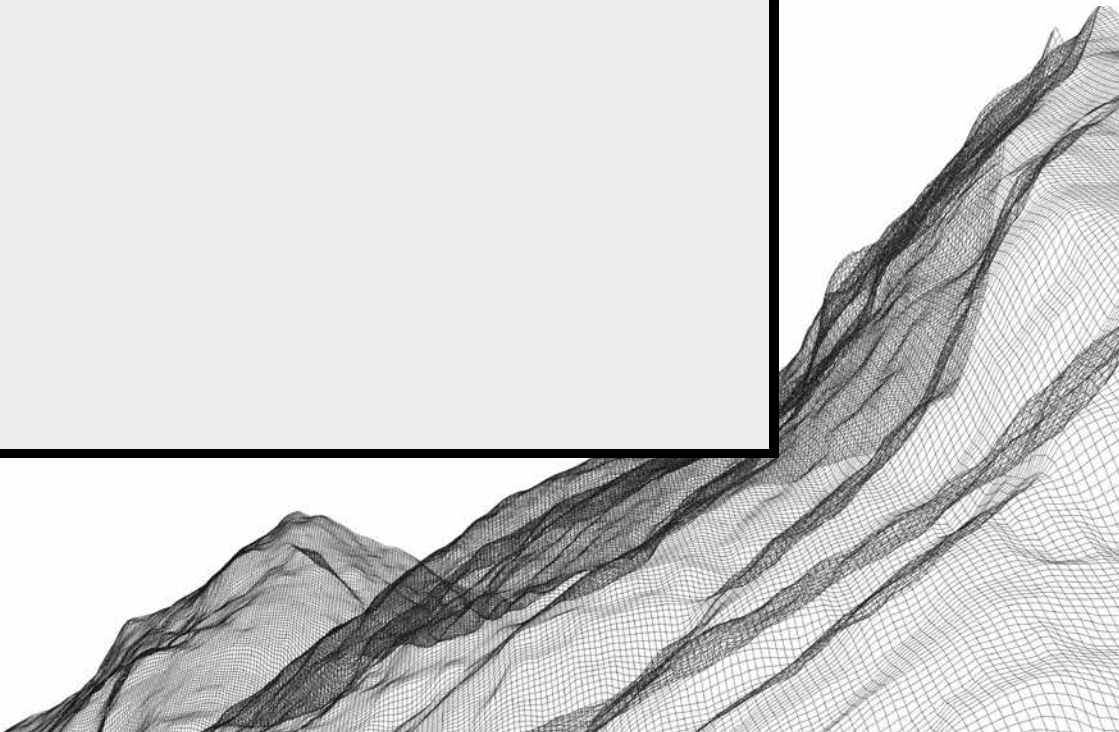


of building and equipping surfaces to organize flows, communication, and exchange, working in concert with the natural environment. The vision guides the project to a more profound commitment, including the development of potential, for the Burano swamp, which doesn't necessarily connect to the functionality of the airfield.

In this sense, the research presented in the *Airfield Manual* (Office for Urbanization 2017) on the potential of decommissioned airports suggests how to include complementary and external factors to the primary function from the initial phase of the project. Or better, this contribution leads us to consider these internal and decisive factors beyond the primary function. For example, the *Airfield Manual* identifies five discrete strategies for the responsible transformation of airport sites: Adapt, Conserve, Convert, Develop, and Regrow. We can include these modalities from the beginning; we can already think of the airfield's immediate and long-term consequences, transforming its side effects into main strengths. From the outset, an airport is a remnant; the archaeological dimension is a substantial part of it, with the vast reserved and unused landscape surrounding the runways and the constraints that hinder urbanization for the necessary security of space. But above all, the airfield is a vast area where human presence is minimal, controlled, and contained within stations, buses, and aircraft. The runway is the center with limited accessibility, huge, and empty. It is singular that the landscape potential of airports is recognized and redeemed only when their activity ceases. In airport design, there is a rigid separation between two different phases. Regularly architects design terminals with great success, just remembering the projects by Eero Saarinen in New York, Renzo Piano in Osaka, Richard Rogers in Madrid, Norman Foster in Stansted, RFR in Roissy, but the functional spaces are rigorously assigned to experts of aeronautics mobility with no interest in the excellent landscape potential hidden in every airfield. The recovery projects of decommissioned airfields can become an essential source of inspiration for the design of the new ones because they elaborate actions that, in many cases, could have been considered from the initial project. The landscape that George Hargreaves, for example, recovers and reconstructs in Crissy Fields in San Francisco

probably could have coexisted, at least in part, with the airport activity of the military base. “Transforming an abandoned airfield is a complex task that walks the line between issues of management — related to wildlife, storm-water, and pollution — and issues of design — related to aesthetic goals, urban networks, and public space — among others” (Open Office 2017, 108) but the same issues could and should be considered in the design of a new airfield.

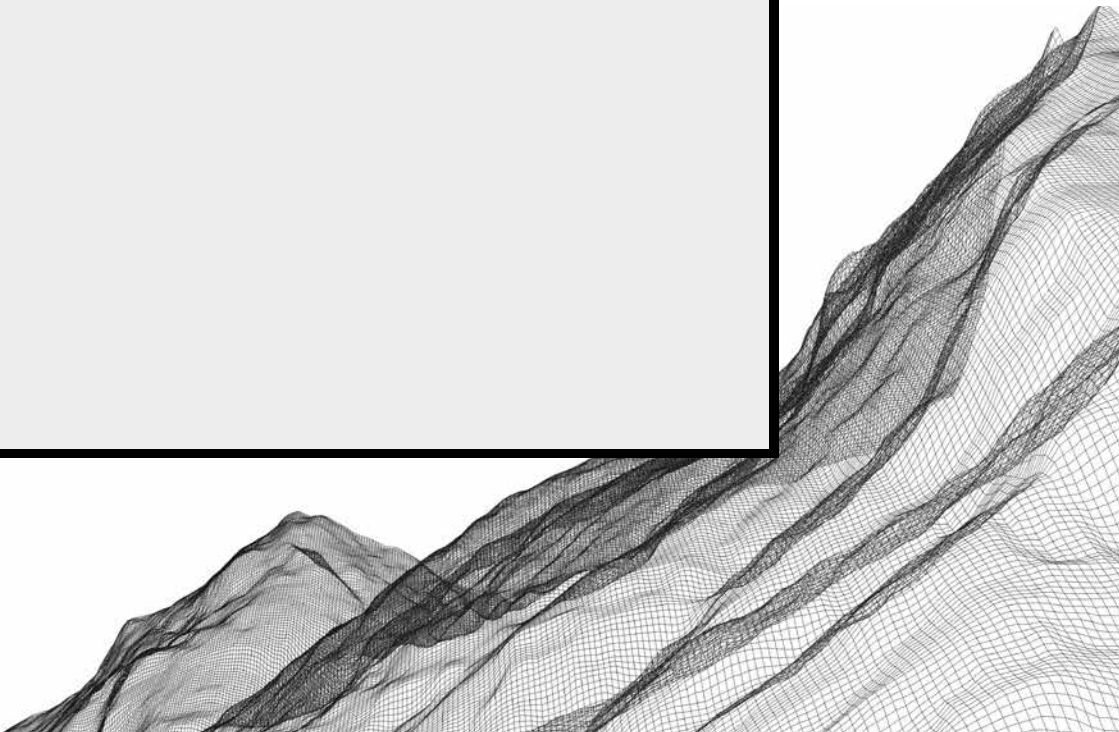
The design of an airfield should therefore include the entire spectrum of potentials: the most evident ones, linked to the increase in flows and traffic, and those that usually emerge only with abandonment, related to the imagination of a new structure and a better understanding of places, compressing an extended time that includes the before, during and after into a unity of place; the memory, the residues and the effects of a stratification that is already, from the very beginning, archaeological.



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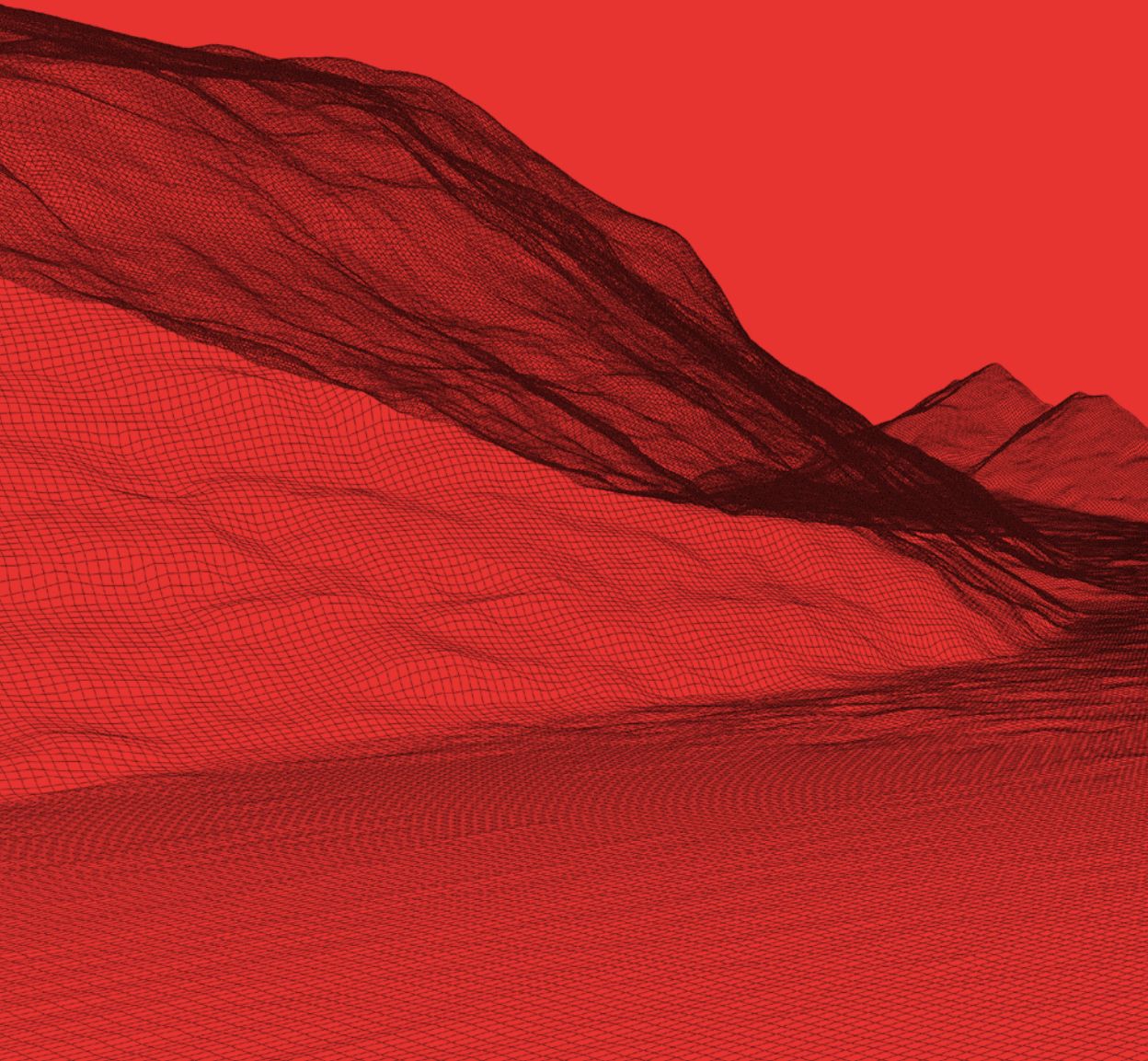
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68 – 69

RENATURALIZATION

CHIARA PRADEL



Tool | Sections

To section means to trace a precise cartesian system over a map, cutting along a predetermined line perpendicular to the plan view to reveal elevation, depth or structural and material composition. The base plans, in this case, are four: the first is an extract from the current official Swiss national cartography (it describes the present situation), the second is a combination of historical cartographic sources and aerial photographs (it describes the past situation), the third and the fourth are schemes of the assumed new interventions and gradual expansion of some islands (they describes the future situation). In the second part of the drawing process, 25 sections—one every 50 meters—cut the four maps. They focus on the relationship between earth (delta) and water (lake or channels), searching for the change of their size, depth and form, while omitting other elements, like buildings, roads, plants. The length of sections (2,5 km) grasps a huge scale of the landscape (going from one mountain to the opposite one of the valley), and refers to a dimension where human activity and geophysical forces are on the same level: dealing with natural processes implies that we can no longer conceive a palimpsest on which only the anthropic scale could find place and only man's action leaves traces.

Following Corboz (1983) the territory as a palimpsest is overwritten time after time, in interaction with previously generated spatial realities. In this sense, the renaturalization intervention is questioned through a system of sections that aims to capture the ever-changing morphologies and the dynamics of landscapes, navigating between scales and time.

Renaturalization as a compensative landscape intervention

The first encounter with this word took place during the observation of one of the highly-altered landscapes connected with the realization of the AlpTransit infrastructure¹, considering and reading a number of official documents (books, scientific papers and legislations)² that highlight how large compensative interventions have intersected the high-speed railway construction. Among others examples, the “renaturalization of the Delta Reuss” aims to recreate an (assumed) natural form of the delta of the river—which had been previously subjected to channelization and suffered from long-term drainage works—thanks to the reuse of huge volumes of soil coming from the Gotthard tunnel excavation and to the modulation of the new delta and river mouth. Searching for a deeper insight on this issue, the following text would select and examine possible interpretations and critical positions toward the meaning of the word “renaturalization”.

Renaturalization as a way to unveil natural processes within design

Starting from the half of the last century, landscape design thinking has been clearly shifting from gardening and planting design to more performative testing of ecological infrastructures,

inspired by, among others, arguments of environmentalists, like John Muir, by both design and ecological sciences, disruptive spatial ideas of landscape urbanism as well as technological knowledge dealing with climate change issues.

As Margaret Grose claims in her book *Constructed Ecologies. Critical Reflections on Ecology with Design* (2017), this mixture of ecology and design has led “to shift from thinking in term of a stable nature and a destabilizing humanity to working with an unstable and changing nature” (Grose 2017, xiii). Also, looking at some examples as the awarded restoration of the devastated ecosystem of Orongo Station wetlands (Nelson Byrd Woltz, 2001-2012), Grose argues that landscape design has shifted away “from the invisibility of natural processes (e.g. water put underground) to visible processes” (Grose 2017, xiii-xiv). Indeed, according to the extensive plan for the 3000-acre land in New Zealand, a large part of freshwater swamp has been re-engineered to allow both designed and spontaneous processes and to accommodate seasonal flooding, making these phenomena the core of the landscape proposal.

Renaturalization questions scale

Many others exemplary ecological restorations, especially starting from the '90s, have been focusing on the recovery, through landscape design interventions, of

1. The NRLA or AlpTransit is a high-speed railway connecting South of Germany to north of Italy, passing through Switzerland.

2. In particular I've considered the SIA 103 regulation and the publication AlpTransit AG ed., *La Galleria di Base del San Gottardo*, Bern: Stämpfli Verlag, 2007. The planned mitigation measures are, in particular, described in: Paolo Lanfranchi et al., “Environmental reclamation for the Gotthard Base Tunnel, effects of spoil management on landscape,” in *Tunnels and Underground Cities: Engineering and Innovation meet Archaeology, Architecture and Art*, eds. Daniele Peila et al. (London: Taylor & Francis Group, 2019), 405–414.

relationships between water (rivers, lakes, wetlands etc.) and urban environments heavily affected by the constructive and deconstructive anthropic actions. One thinks at the “Renaturation of the watercourse of the Aire” near Geneva, by Atelier Descombes Rampini with Superpositions (2011-2016), at the “Los Angeles River Revitalization” (2007), or at the “Cheonggyecheon river restoration” in Seoul (2003-2005).

However, research such as the one led by Dredge Research Collaborative team—which reflects on the restorations of the greater American coastal and fluvial areas—clearly bring out the exponential connectedness and extension of sites where to intervene. How to deal, for example, with the attempt to rethink the ecological asset of gigantic operations as the Panama Canal expansion (Brian, Holmes and Milligan 2015), that is still reshaping cities throughout the Americas? At this point, it is no longer possible to consider the “renaturalization” process as an operation delimited to small local sites or to a residual fragment, nor “landscape architects should be satisfied with their role as decorators who partially spruce-up the leftover” (Krull 2012, 13), since monumental infrastructural transformations are simultaneously affecting several inter-connected open spaces and are more and more broadly reshaping the landscapes all around us, on a planetary scale.

Renaturalization questions time

The prefix “re” evokes a repetition or a backward motion. Every present landscape, indeed, is haunted by traces of multiple past natures—constituted not only by plants and animals, but also by

topographical or geologic formations—to which one can refer in order to reestablish them, thanks to a “renaturalization” project. Kind of “ecological restoration” are often rooted in nativist ideas of ecology, that differ from the contemporary intrinsic features and notions of nature. Let’s consider, for instance, the provocative example described by Maja and Reuben Fowkes (2018), in which the reintroduction of bison, moose and wild horses, within a park in Siberia, is planned to transform the mossy tundra into a grassy steppe—similar to the mammoths’ habitat—or the Wicken Fen 100-years rewilding plan in England. In an epoch of forecasted mass extinction, and in which we might lose the majority of all species (Raven 2000), careful “renaturalization” actions may set dynamics that will ultimately result in autonomous habitats and self-managing landscapes that, like ecological refugia, help in “combating the malaise of ‘ecological boredom’...and the widespread indifference to the approaching specter of ecological disaster” (Fowkes 2018, 389). Of course, these rewilding projects “can also be seen as the most extreme manifestation of the modern, romanticized Western mindset that simultaneously idealizes the purity of lost wilderness and champions scientific intervention to restore it” (Fowkes 2018, 389).

Spatial/temporal frame within a never-ending process

According to Gandy (2013) we could argue that, in the renaturalization projects, one kind of cultural landscape (the contemporary urban one), is replaced by another equally artificial cultural landscape (different in time and/or place), which is part of an eco-oriented process of

redevelopment. This interpretation avoids to erase the social and cultural dimension intrinsic on every landscape intervention and to separate it from the geographical/historical perspective, neglecting the unavoidable mutual inter-dependency and relation with its context.

From this point of view, renaturalization projects may become laboratories of large-scale ecological design research:

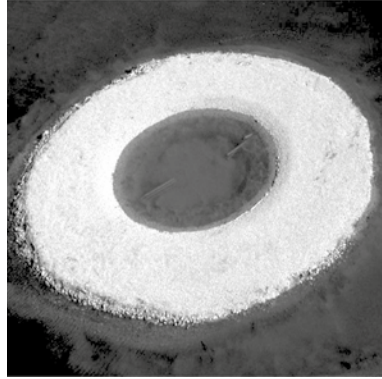
while progress train us to unquestioningly keep moving forward, the achieving of renaturalization processes may show us multiple unruly temporalities, extending our senses beyond our comfort-zones and leading to a more fluid spatial-temporal approach in opposition to a static, technopositivist or a-critic landscape design paradigm.

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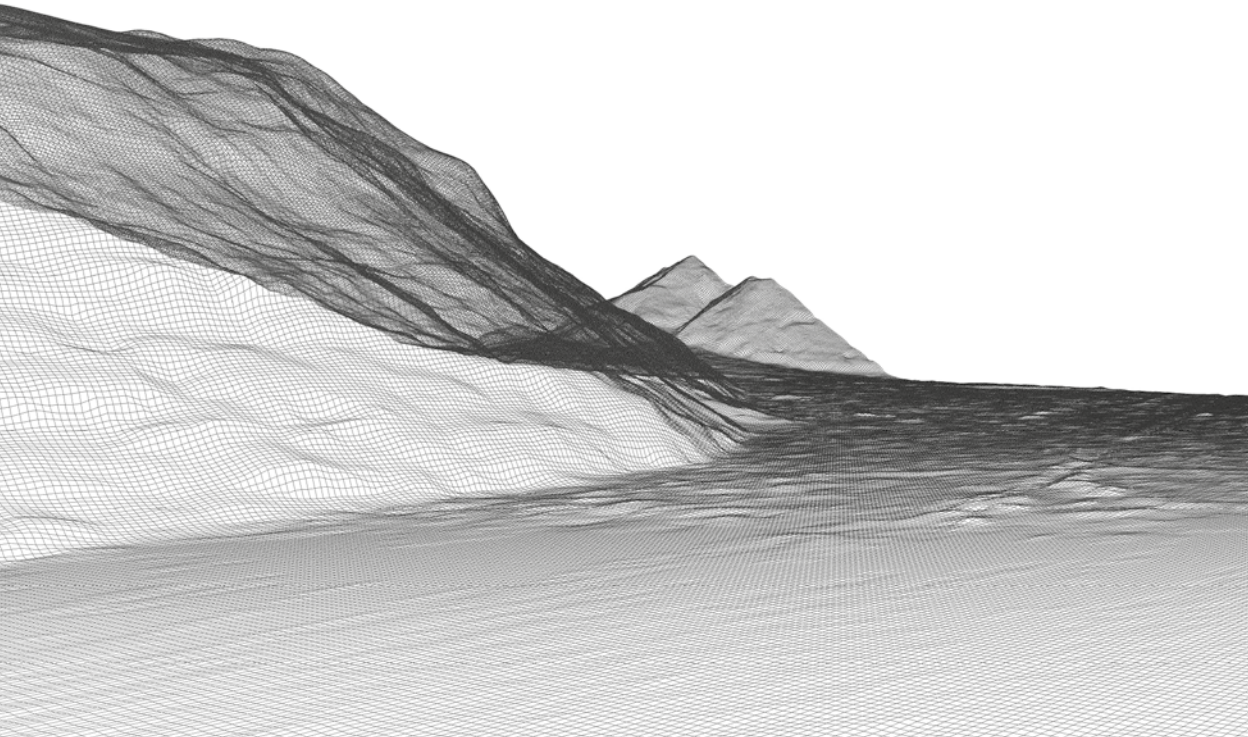
a



b

Renaturalization of a river delta:

a) the Reuss river delta, 1974; b) Renaturalization of the river, project by ILU Office 1988-1992; c) Construction of new islands made by material coming from the excavation of the Gotthard tunnel. Erstfeld, 2002; d) Renaturalization of the delta, current situation.



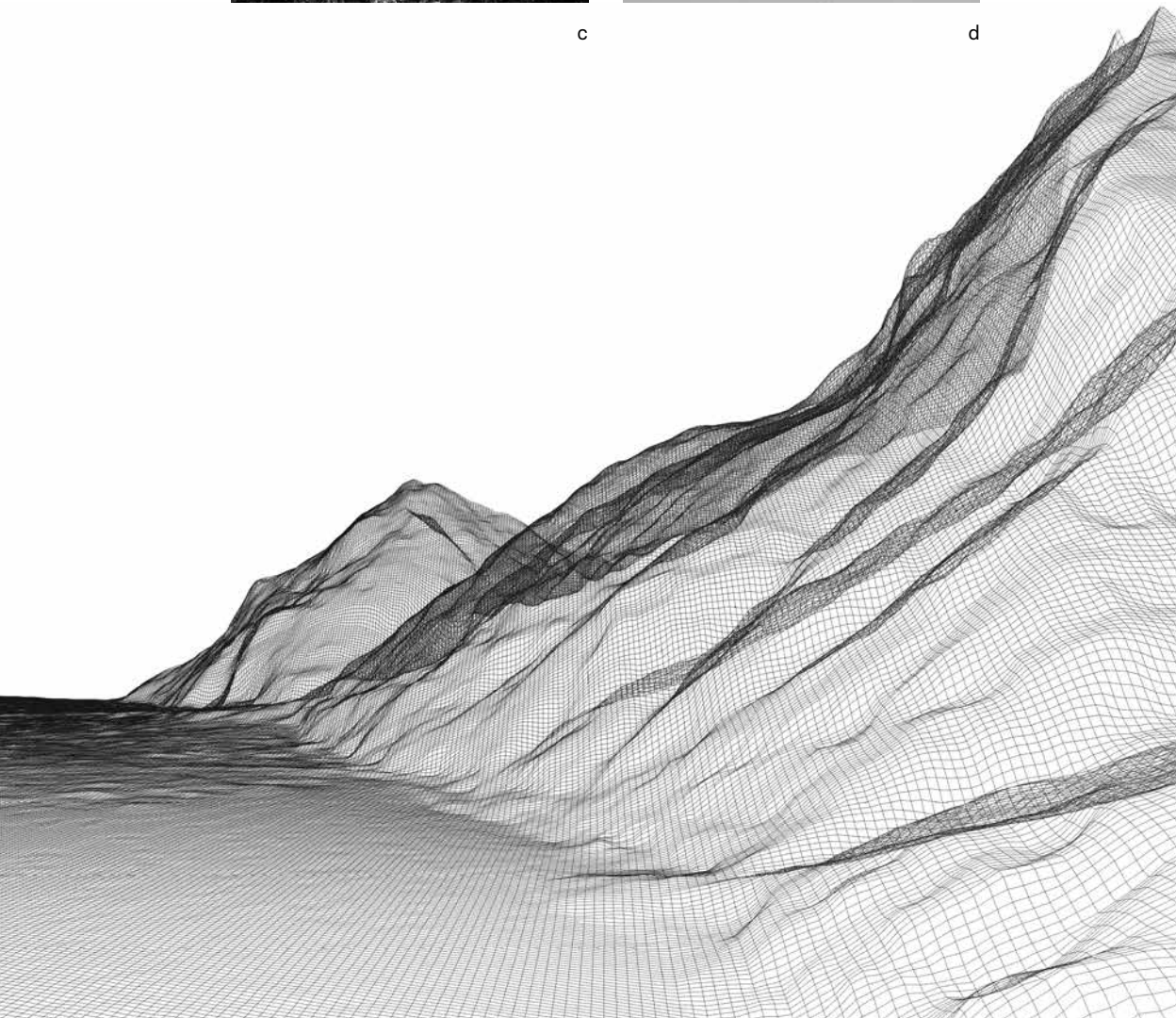
RENATURALIZATION



c

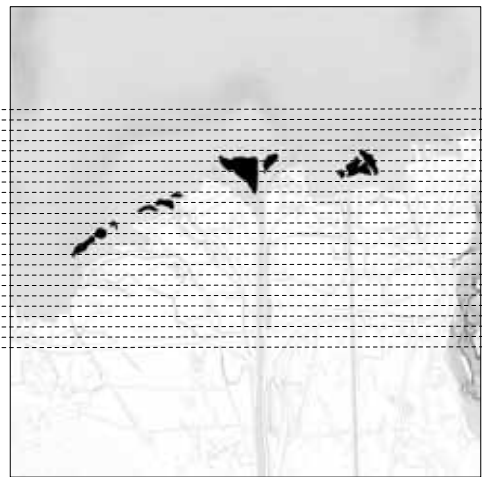
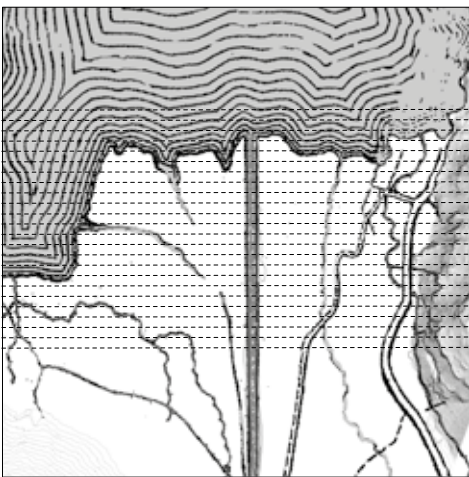
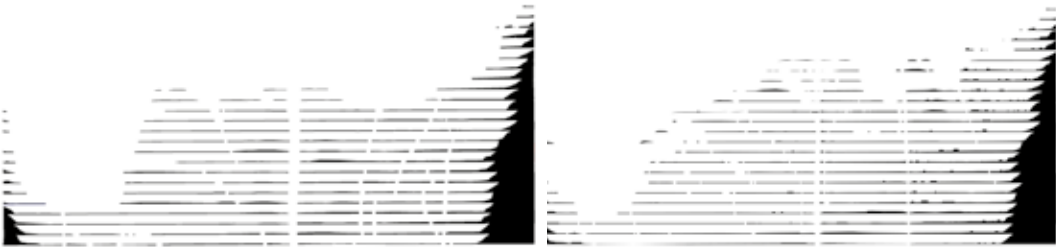


d



1984

2002



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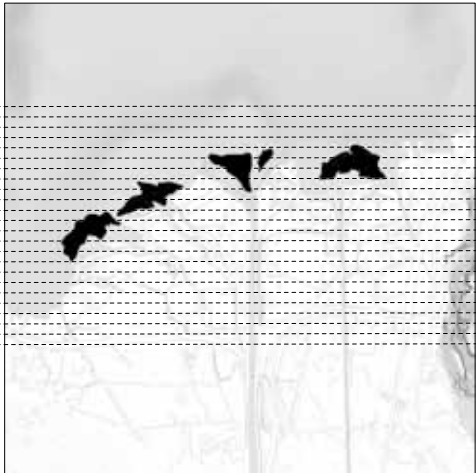
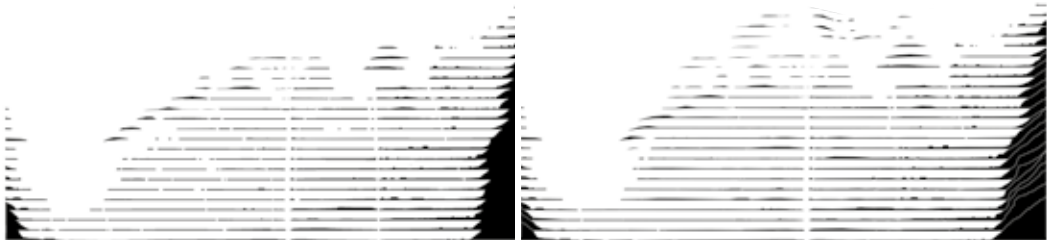
25 sections—one every 50 meters—cut four maps of the Reuss river delta:

a) 1894: the river deviation and the new canal; b) 2002: the renaturalization of the delta (two phases);
c-d) 2035-2050: envisioning the growth of the river delta

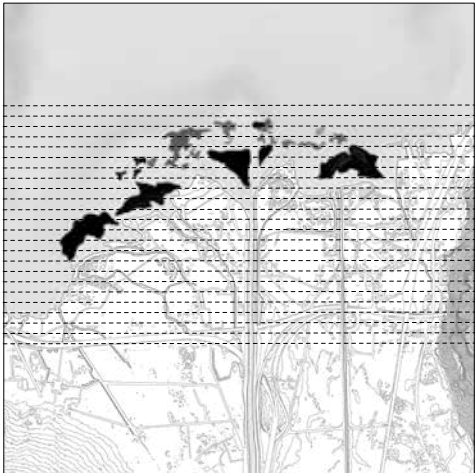
RENATURALIZATION

2035

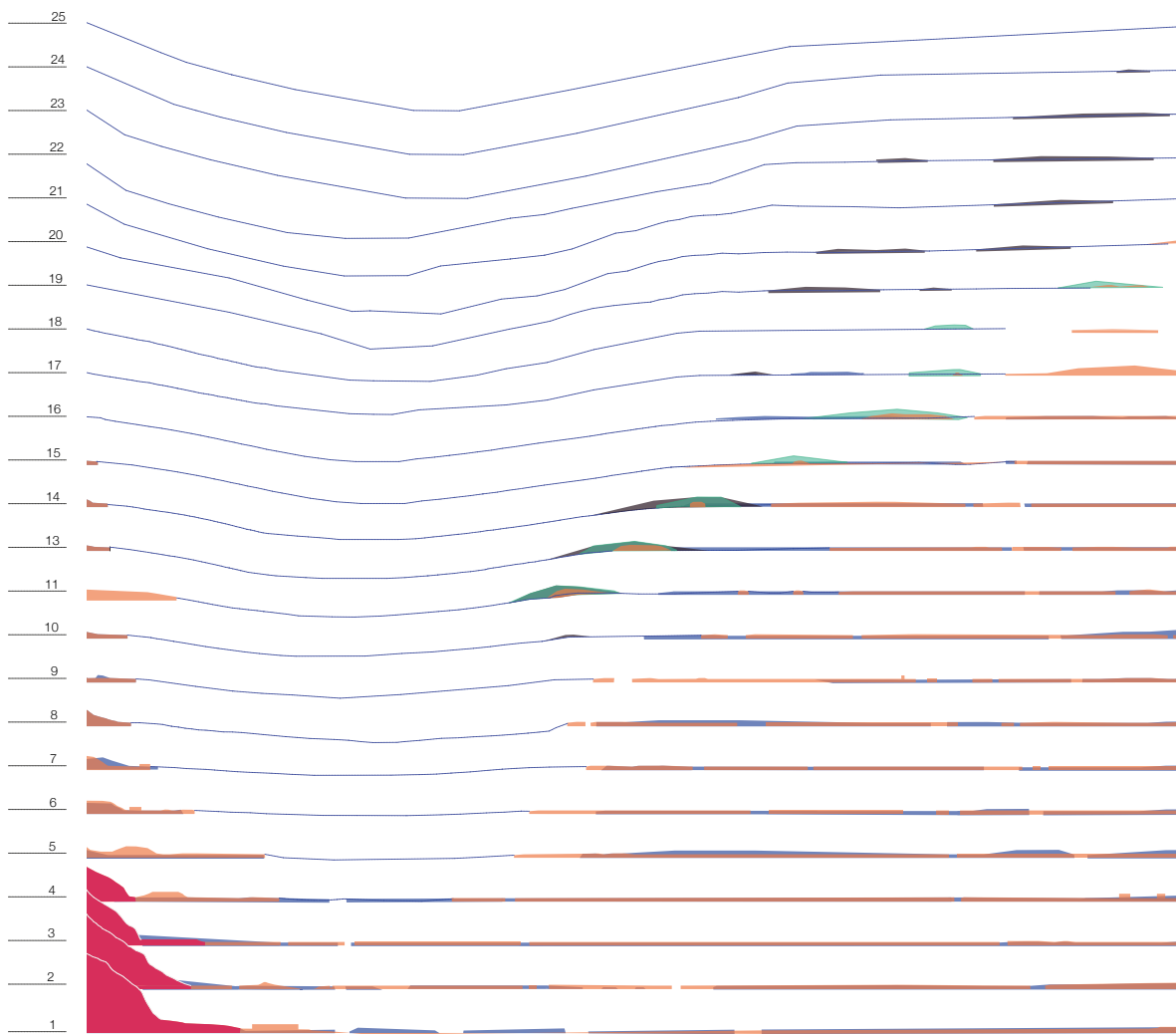
2050



c



d



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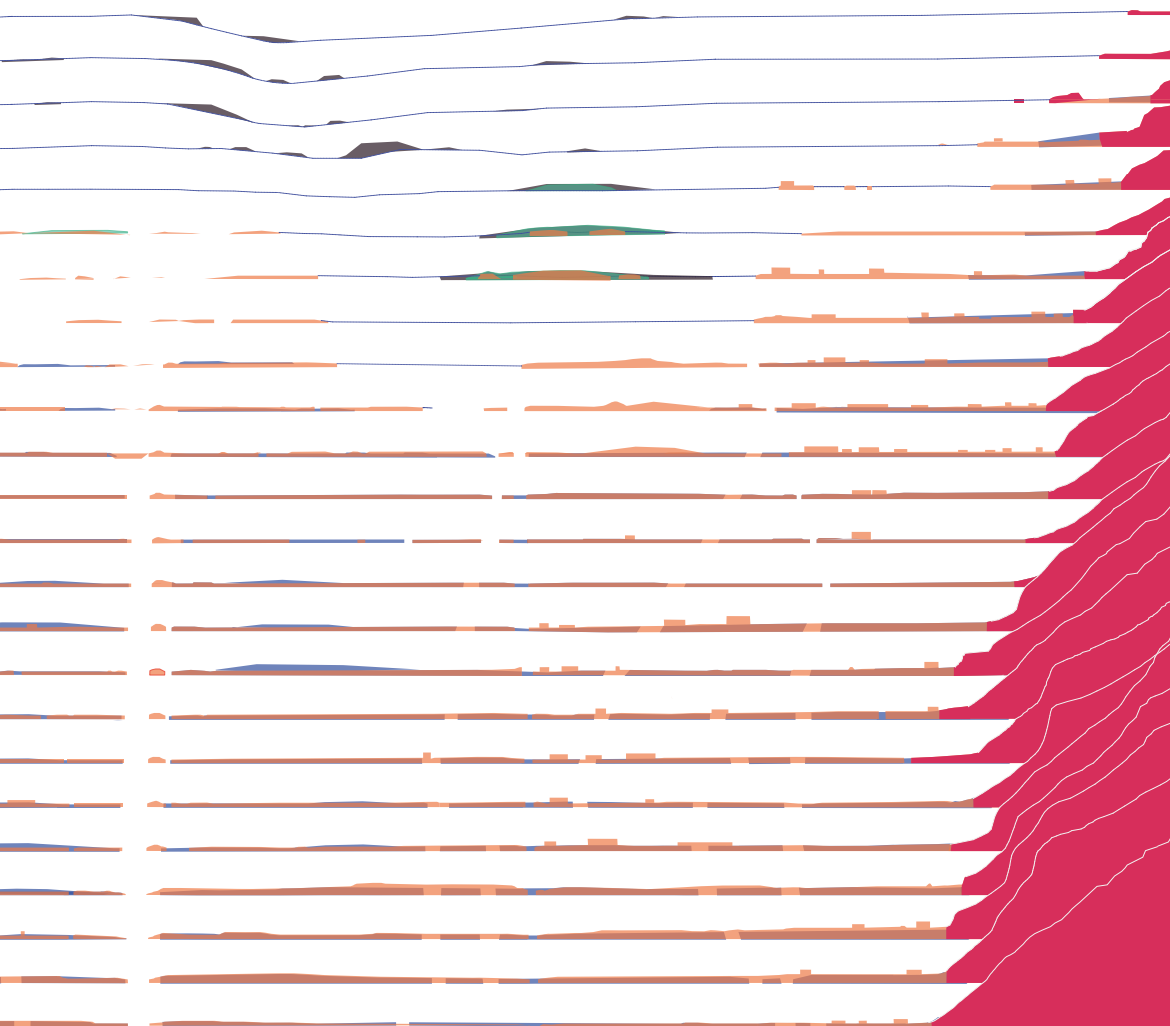
1894

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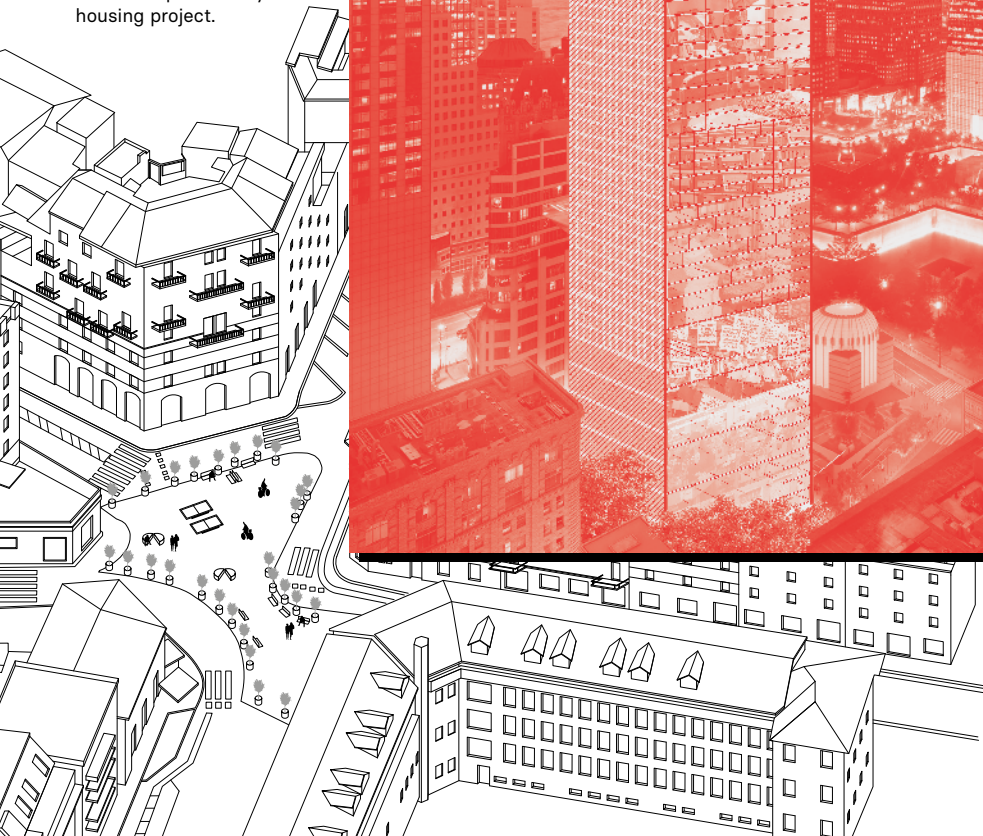
RENATURALIZATION



Overlapping of 25 sections taken in different times.

The drawing aims to represent the dynamical, variable, fluid landscape of the Reuss river delta and to capture the processuality of the landscape formation.

WO-HO-HY, Vertical Urban Factory proposal, designed with Sara Mountford, for WCT5 in Lower Manhattan organized by citygroup and New York Review of Architecture with the Coalition for a 100% Affordable 5WTC. The project includes mixed-use spaces in a high-rise as an alternative to the developer's luxury housing project.



OPTIMISTIC HYBRIDS

NINA RAPPAPORT

Introduction

In considering the many layers of urban fabric, it becomes clear that industrial spatial practices are often pushed aside or ignored by urban planning agencies and architectural design studios, while urban economic development divisions focus on tech and other large-scale businesses that frequently lead to gentrification, crowding out the possibility of industrial spatial innovation. With an optimistic view of the potential for returning material production to cities—especially following the COVID-19 crisis—I continue to focus my research on the physical, social, and economic aspects of urban production, particularly the related spatial shifts, and the question of reintegrating diverse uses in cities through hybrid space supporting multiple programs. Previously unimagined new hybrids can be identified simply through observation, place finding, and sensory perception, removing bureaucratic regulation from the equation. Even redefining the term *postindustrial* (currently signifying local, small, sustainable production) to include ideas of industrial integration with other uses can provide an entree into hybrid concepts that provoke non-typological types.

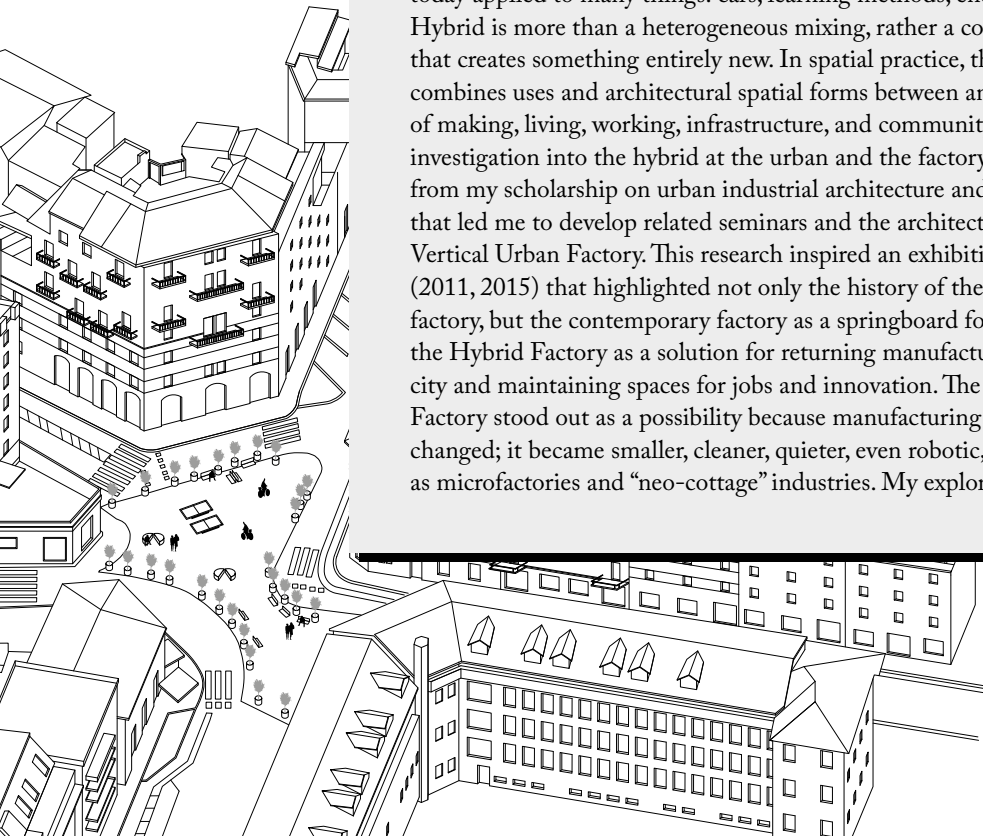
Cover image, credit
see: <https://citygroup.nyc/5WTC>, March 2022

1. See *Hybrid Factory/ Hybrid City*, Future Urban Legacy Lab: <https://full.polito.it/talkmedia/nina-rappaport/>.

Jane Jacobs remains a touchstone for encouraging urban mixes, recognizing the value of proximity between different uses, and highlighting the way that one enterprise grows into other related companies, however recent ideas of mixity rarely include industry. My recent research and advocacy center around my belief that planning agencies, property developers, and architectural firms can indeed create combinations in new ways. This idea has been gaining traction as it is increasingly the subject of architecture seminars, workshops, studios, and the 2020 symposium *Hybrid Factory/Hybrid City* at Politecnico di Torino's Future *Urban Legacy Lab* (Rappaport 2022).¹ And, indeed, with an optimistic considered outlook today, material production is returning to cities with new methods, new spaces, and economic configurations that are smaller, cleaner, and quieter. This trend will increase cities' self-sufficiency at the local level without denying global trade at the "glocal" scale.

New Hybrids

Defining the word *hybrid* is complex in and of itself. It is a biological term that originated with the grafting of plants and animals, but is today applied to many things: cars, learning methods, energy sources. Hybrid is more than a heterogeneous mixing, rather a combination that creates something entirely new. In spatial practice, the hybrid combines uses and architectural spatial forms between and inclusive of making, living, working, infrastructure, and community uses. My investigation into the hybrid at the urban and the factory scales grew from my scholarship on urban industrial architecture and its contexts that led me to develop related seminars and the architectural studio Vertical Urban Factory. This research inspired an exhibition and book (2011, 2015) that highlighted not only the history of the Modernist factory, but the contemporary factory as a springboard for imagining the Hybrid Factory as a solution for returning manufacturing to the city and maintaining spaces for jobs and innovation. The Hybrid Factory stood out as a possibility because manufacturing itself had changed; it became smaller, cleaner, quieter, even robotic, manifesting as microfactories and "neo-cottage" industries. My exploration of



the themes of productive cities and the vertically stacked factories of the early twentieth century took me on a journey that began with an examination of the physical prowess of architectural structure and related space—and, thus, capitalism—to a consideration of factory workers, their pride in their work,² and workers' rights initiatives.

My ongoing ethnographic film project comprised of interviews with factory workers, titled *A Worker's Lunch Box*, gives the workers a voice and demonstrates their pride in their hand work and their interest in their community and “essential” roles (Rappaport 2015).

What I observed in factories around the world—from the large-scale Albert Kahn-designed Ford Highland Park mass production building of 1911 to the smaller-scale, more robotic advanced technology centers in Turin and Pittsburgh—was that the way things are made influences how spaces for production are designed, creating a system in which “form follows flow” (Henn 1995: 106-107). However, city planning agencies do not respond fast enough to new technologies to acknowledge those changes or the diverse new spatial configurations required to accommodate them. In addition, the inclusion of public spaces for worker amenities—“the industrial commons”—are not taken into consideration in new factory designs so that they can become more hospitable workplaces. In the aftermath of COVID-19, factory workers are demanding more. In the United States, unionization is on the rise and workers are taking charge of their spatial conditions, just as they did during the massive rise of unions in the early twentieth century.

Undoing Typologies

The typology of the factory has long been analyzed as a place of experimentation for Modernist architects in terms of structural engineering and the organization of production processes.³ But this typology becomes stagnant when used by companies as a capitalistic tool to produce goods by applying Frederick Taylor's 1911 Scientific Management systems to the efficient flow of their buildings, without regard for the workers (McLeod 1983). In company towns such as Zlín, Czechoslovakia, built by the owner of Bata shoes, the 1930s

2. For more information refers to: <https://www.verticalurbanfactory.org/>

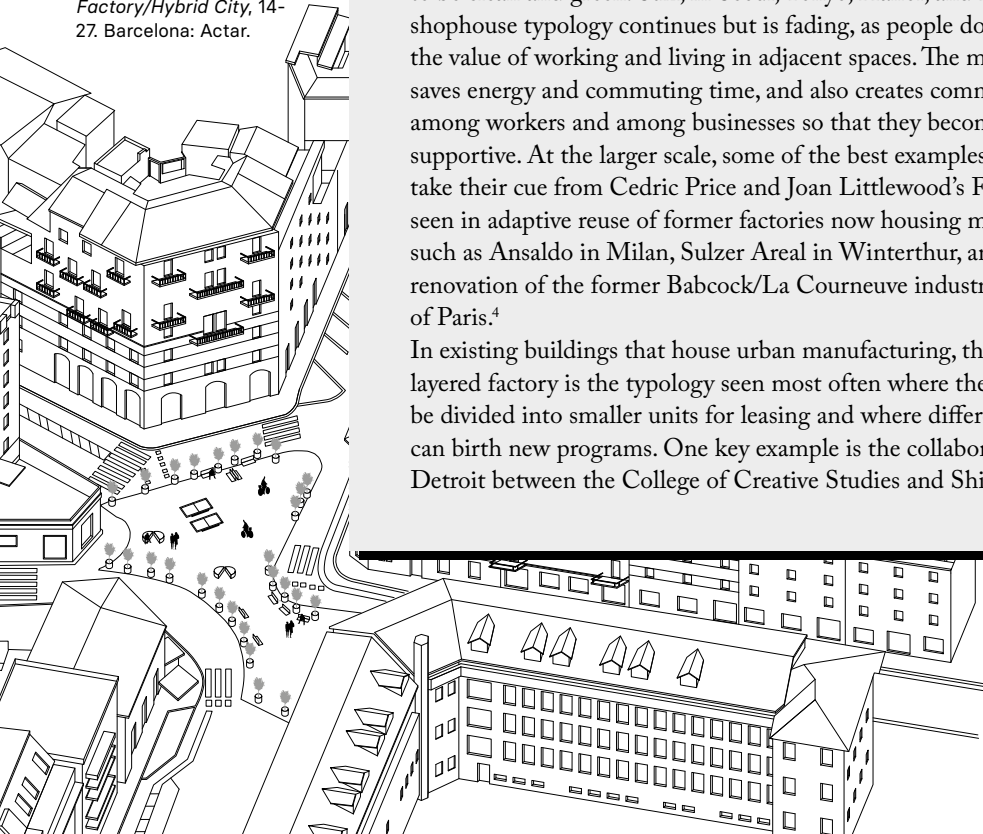
3. Nina Rappaport, “Reception and Image of Modern Industrial Buildings”, Docomomo Conference Proceedings, Paris, 2002.

4. I was part of a competition entry for Babcock that was not completed, currently the plan is by Portzamparc Architects, 2022. See also my essay Nina Rappaport. 2022. "Oil-Factory." In *Hybrid Factory/Hybrid City*, 14–27. Barcelona: Actar.

construction module of 6.15 x 6.15 meters was repeated endlessly in a generic grid for all building types. However, typologies are subjective, as cultures create them based on their own needs and activities, whether work, play, commuting, gardening, sleeping, or dancing. While former Modernist factories are often generic in their open spatial qualities (Baum and Kees 2012)—the insertion of production lines make factories specific due to the coordinated movement between special tasks that determines what workers can do within, around, and between the machines. The generic modules affected Zlín and the town's housing layouts abstractly without consideration for the interiority of family life and domestic activities, including household labor. This formula became the generic space of global domestic concerns, because the specific is unflexible, unable to be as easily adapted to new uses or to house new mixes.

If we unlearn and refocus, what architectural hybrids can we consider that will offer unprogrammed, mixed spaces and support and provide for the worker's needs and comfort? The combination of working and living can be recombined as they once were in the farms and cottage industries of the first Industrial Revolution but have the potential now to be clean and green. Still, in Seoul, Tokyo, Hanoi, and Bangkok, the shophouse typology continues but is fading, as people don't realize the value of working and living in adjacent spaces. The mix of uses saves energy and commuting time, and also creates communities among workers and among businesses so that they become mutually supportive. At the larger scale, some of the best examples are those that take their cue from Cedric Price and Joan Littlewood's Fun Palace, seen in adaptive reuse of former factories now housing many uses such as Ansaldo in Milan, Sulzer Areal in Winterthur, and the future renovation of the former Babcock/La Courneuve industrial site, north of Paris.⁴

In existing buildings that house urban manufacturing, the stacked or layered factory is the typology seen most often where the structure can be divided into smaller units for leasing and where different adjacencies can birth new programs. One key example is the collaboration in Detroit between the College of Creative Studies and Shinola in



the Albert Kahn-designed former GM building where dormitories, classrooms, and a watch factory, now hotel, coexist. In the Diamond District in New York, a new tower houses offices, trade rooms, and diamond finishing.

In terms of new construction, Belgium is one country where there is interest in mixing uses by both cities and developers. Partially because of the forward-thinking capital city of Brussels' urban density and need for vertical urban factories, municipally sponsored projects include Urbanities now under construction that BW Promo is developing and B2Ai + MSA + plusoffice architects have designed. The 2019 project entails a podium with production spaces and high-rise towers to accommodate housing, as well as an interweaving layer between production levels and housing units.⁵ Another interesting hybrid built within existing factories includes the Fondazione MAST in Bologna designed by Labics Studio (2013) that houses a museum of industrial photography and employee amenities such as day care centers and health clinics for workers at the adjacent Coesia factory, which specializes in industrial packing solutions. Such projects have a chance to inspire new hybrid possibilities that became amplified during the COVID-19 pandemic. In 2020, a new mix of working and living arose within the homes of white-collar workers. Many urbanists grappled with this cultural shift, noting the shorter commutes and greater demand for local services in their assessments of the new "15-minute city." Yet, industry, with its attendant jobs, were not included in their analyses.

These issues drew me to further study worker and urban policy questions. In addition to looking at the field from the perspective of architectural design as a spatial practice, I became an advocate for returning manufacturing to cities. At the same time, I am considering how we can change our thinking about Modernism in relationship to the city and past segregation of uses and, correspondingly, populations. If manufacturing and light industrial small-to-medium-enterprise (SME) businesses return to cities, the companies provide jobs in part of an ecosystem that responds to social justice and equity.

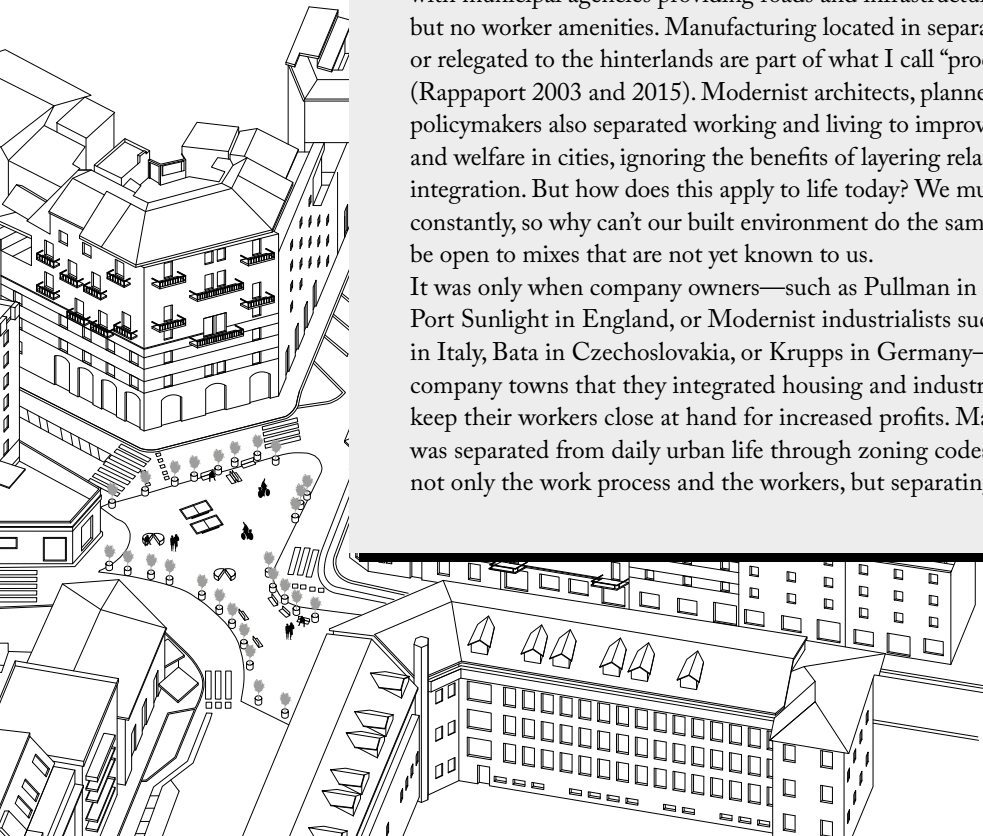
5. For more information, see: Bouwmeester maitre architecte, *Brussels Productive City*, June 2019. This project was also included in the Brussels version of the *Vertical Urban Factory* exhibition on display at Halles Saint Gery (April 28 - August 29, 2022).

Scalar Possibilities

Urban Scale

The broader lack of interest in the hybrid at these two scales—the building and the urban—became one of my essential inquiries. At the city scale, in the United States, zoning regulations controlled uses through the *Amber vs. Euclid* law case that upheld the right of a property owner (especially residential) to complain about “nuisances” that included pollution, noise, and odors. Single-use zoning became the norm to separate the polluting activities, which was necessary to do to foster a healthy living environment. Manufacturing became located in separate districts, as compared to scattering in informal urban communities. Segregated industrial zones enclosed with physical boundaries became the norm for industry in the early twentieth century, especially for heavy industry such as the Brooklyn Navy Yard in New York or Goose Island in Chicago which were physically separated by walls and gates or surrounded by thoroughfares as dividing lines. This practice continues today either in groups of blocks that are zoned industrial or in industrial Export Processing Zones. EPZs are enclaves operating with their own tax incentives, land use, and plot organization, with municipal agencies providing roads and infrastructure services but no worker amenities. Manufacturing located in separate districts or relegated to the hinterlands are part of what I call “process removal” (Rappaport 2003 and 2015). Modernist architects, planners, and policymakers also separated working and living to improve health and welfare in cities, ignoring the benefits of layering related to urban integration. But how does this apply to life today? We multitask constantly, so why can’t our built environment do the same? We need to be open to mixes that are not yet known to us.

It was only when company owners—such as Pullman in Chicago and Port Sunlight in England, or Modernist industrialists such as Olivetti in Italy, Bata in Czechoslovakia, or Krupps in Germany—developed company towns that they integrated housing and industry, albeit to keep their workers close at hand for increased profits. Manufacturing was separated from daily urban life through zoning codes, segregating not only the work process and the workers, but separating the workers



from the city. Thus, zoning homogenized urban character. Gradually, over the past few years, zoning regulations have been reevaluated to blur the strict zoning use separation in cities such as Vancouver, Berlin, Milan, and Brussels, among others.

Building Scale

Building hybrids have evolved both consciously and haphazardly throughout architectural history. At the building scale, the hybrid is often attempted but still ignores industrial use. Usually, change happens organically in leftover urban spaces, both legally and illegally, as in Manhattan's Garment District and in SoHo, where artists' living and working arrangements became legitimized as live-work lofts. The legalization of these spaces protected artists and maintained SoHo's creative culture, but the transition of garment spaces to residential eliminated manufacturing uses, as they could not be monitored. But these hybrid situations critique Modernist tenets of monofunctionality, leading to new formal concepts and vibrant vertical communities. The mixes provide not only a dynamic population intermingling all classes and interests but also offer flexibility during times of economic uncertainty. However, manufacturing is rarely considered as one of the possible uses. This is due to many issues, including zoning and building regulations and a lack of interest on the part of planners and property developers. A few discussions have dominated the discourse on hybridity involving architects such as Rem Koolhaas, Steven Holl, and Bernard Tschumi, as well as developers interested in mixed-use. The topic interests both groups because it would lead to buildings with longer life spans and building solutions for tight urban contexts. Hybridity would solve more than one problem for cities by providing options and opportunities that make investments more resilient—if one type of use doesn't sell, another will in the future. In terms of design, we see a mix of structural systems, materials, and forms, but none take enough risks to pose a new composite paradigm. How then do we teach brave new program juxtapositions that merge into hybrids holistically—from the detail to the building scale and the city scale? Can design be directed with unexpected adjacencies where those then

forge new building and structural technologies that are hybrids in and of themselves, beyond the static placement of materials and uses next to each other?

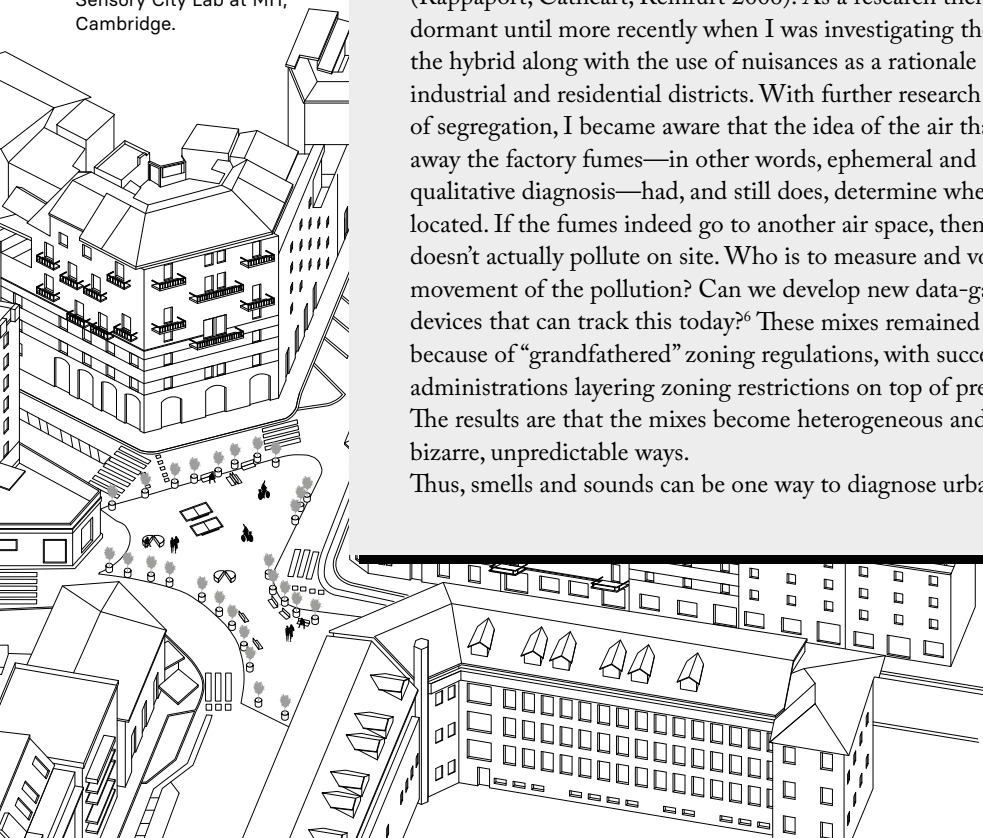
Sound and Scentscapes

The city is organically even more mixed than we realize. One means of analyzing it phenomenologically is through its sensory characteristics—among them, smells and sounds that contribute to atmospheres (Rappaport 2022: 14-27). In studying Ebenezer Howard's diagrammatic circular plans for the Garden City, one can see that he explicitly locates industries to the south so that the wind blows pollution away from the residential areas. But what if the wind blows in a different direction—is it always consistent? This too has been observed by city planning administrators who question using wind direction as a method to control pollution and nuisances.

When I completed an urbanism study in Long Island City, I was impressed by the variations in the scents of the industrial districts and wrote of the smells of plastic melting in the mannequin factory and then getting a whiff of chocolate baking from the nearby factory (Rappaport, Cathcart, Reinfurt 2006). As a research theme, this lay dormant until more recently when I was investigating the idea of the hybrid along with the use of nuisances as a rationale for dividing industrial and residential districts. With further research on issues of segregation, I became aware that the idea of the air that blows away the factory fumes—in other words, ephemeral and sensory qualitative diagnosis—had, and still does, determine where industry is located. If the fumes indeed go to another air space, then the factory doesn't actually pollute on site. Who is to measure and vouch for the movement of the pollution? Can we develop new data-gathering devices that can track this today?⁶ These mixes remained in place because of "grandfathered" zoning regulations, with successive city administrations layering zoning restrictions on top of preexisting ones. The results are that the mixes become heterogeneous and contrast in bizarre, unpredictable ways.

Thus, smells and sounds can be one way to diagnose urban industry

6. Some of this work is being conducted by the Sensory City Lab at MIT, Cambridge.



that is ephemeral and constantly in motion. These are both positive and negative, and they trigger our visceral memories. Atmospheric outputs can serve as locators to identify industrial uses, and, when a factory doesn't emit them, the case can be made for a mix with other uses. Concerns for public safety and well-being must take priority, but if industries no longer smell, then the category of "nuisance" does not need to be regulated by city planning offices, and new kinds of non-zoning, codeless buildings, and performance zoning can be initiated. The focus on smells is an aspect of industry that I researched and explored in "Ol-factory," an essay in my book *Hybrid Factory/Hybrid City* (Rappaport 2022), specifically the use of smells to diagnose urban factory conditions and their potential integration into the urban fabric. In writings by Ivan Illich, Diane Ackerman, Proust's well-known passage on the madeleine, and other descriptions of cityscapes penned by writers, smells identify places and their auras and atmospheres.⁷ Smells, which are often taken for granted or ignored, invest cities with sensory dimensions as important as their visual ones (Lefebvre 1991). The hybrid smells then represent the hybrid city in all of its urban vitality, mixity, and dimensionality.

Proposition for Design Solutions

Building Scale

In considering the concept for the hybrid mix of a factory with other uses, the development of the "Vertical Urban Factory" as a multistoried factory in cities (which I refer to as both metaphor and as a real structure) can actually contain these mixes as it represents a potential platform for revived spatial, social, and technological shifts in manufacturing. This layered building of stacked floors for different companies or the integration of one company within an individual building is a historic typology that has been ignored, aside from its reuse for loft housing and office space. However, it now is returning as mixed-use manufacturing spaces, seen with the revitalization of seven buildings by the Greenpoint Manufacturing Design Center in New York and Globe Dye's building in North Philadelphia, albeit minus living spaces.

7. Graphic designer Kate McClean has been mapping smells see: <https://sensorymaps.com/>

8. My Vertical Urban Factory team's proposal, WO-HO-HY (March 2022), for WCT5 in Lower Manhattan included these mixed-use spaces in a high-rise as an alternative to the developer's luxury housing project. See: <https://citygroup.nyc/5WTC>.

9. David Harvey, "The Right to the City," *The New Left Review*, 2008 is picking up from Henri Lefebvre's ideas from his essay, "The Right to the City," *Writing on Cities*, trans. Eleonore Kofman and Elizabeth Kebas (Cambridge, Mass: Blackwell Publishing, 1996).

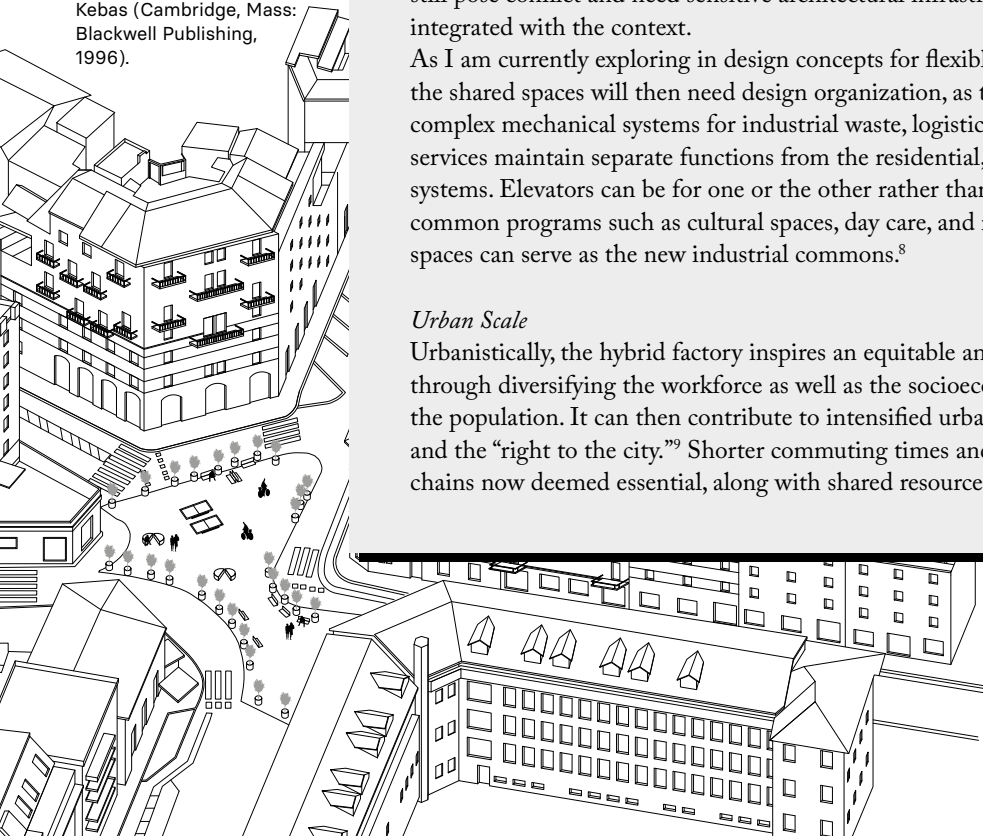
From the Middle Ages through the late nineteenth century, working and living were mixed so that residential areas and workspaces provided a civic ensemble. Today, similar hybrids could be developed as catalysts for mixed-use work and living spaces in which the housing can subsidize the urban manufacturing spaces that have become unaffordable for many companies. People can live adjacent to a neighbor's workspace or even live and work in the same building in a hybrid form that I see call a "vertical company town." This typology can be designed with new solutions as a hybrid form and hybrid use reintegrated in cities both in terms the action of making things and the industrial spatial requirements.

Beyond numerous conjectures, we can actually build a mix of residential uses with production spaces in one building. With the shift of manufacturing from large-scale and heavy to light, clean, small, high-tech, customized production, companies and their related spaces have become "neo-cottage" industries. These are suitable to reside in multiple spaces in larger buildings that can be mixed by floor or tenant-by-tenant. Some might consider this type of manufacturing to be a "soft" factory typology, as it is not heavy and crude, but uses might still pose conflict and need sensitive architectural infrastructure to be integrated with the context.

As I am currently exploring in design concepts for flexible buildings, the shared spaces will then need design organization, as the more complex mechanical systems for industrial waste, logistics, and services maintain separate functions from the residential, less complex systems. Elevators can be for one or the other rather than shared, while common programs such as cultural spaces, day care, and relaxation spaces can serve as the new industrial commons.⁸

Urban Scale

Urbanistically, the hybrid factory inspires an equitable and open city through diversifying the workforce as well as the socioeconomics of the population. It can then contribute to intensified urban vibrancy and the "right to the city."⁹ Shorter commuting times and local supply chains now deemed essential, along with shared resources, will foster



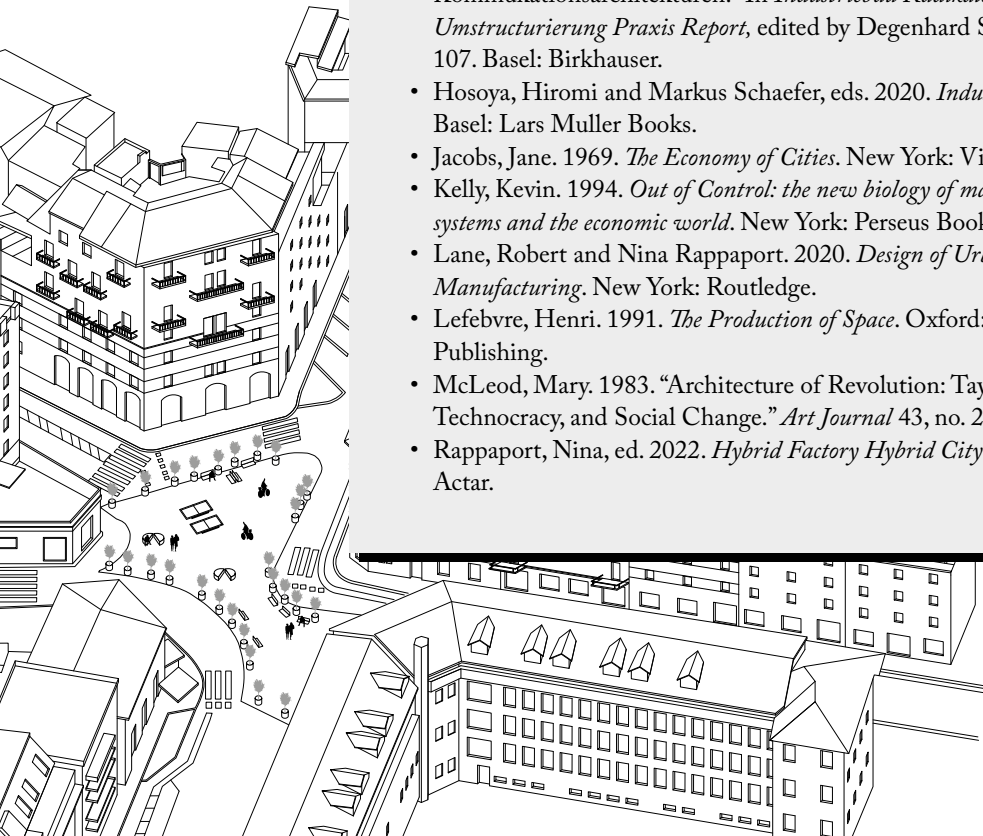
more resilient and sustainable workplaces by reducing the carbon footprints of both workers and companies. By being freed from zoning regulations that restrict too many specific uses there is a potential for integrating the making of things back into the urban fabric. The new economy of advanced technologies will not only influence the shape of the city but also the individual buildings where production occurs (Rappaport 2017c).

Non-Typology Types

On the economic side, an intensified hybridity will maintain industrial uses because of the potential for cross-subsidies between the higher and lower real estate values and hybridity can entice more companies to move to cities, to provide employment for making things locally in a transparent and equitable workplace. The potential to reweave the diverse uses in the urban fabric in a blended mix becomes an opportunity to revalue the worker, not only the architecture and space. What if we could imagine new mixes within the finer grain of the building combined within the greater urban whole in a new hybrid paradigm—one that represents a new architectural typology with performative zoning regulations—or none at all—and one that can give rise to open, cosmopolitan cities of layered networks which support social equity, multitasking, and multifunctionality to be resilient.

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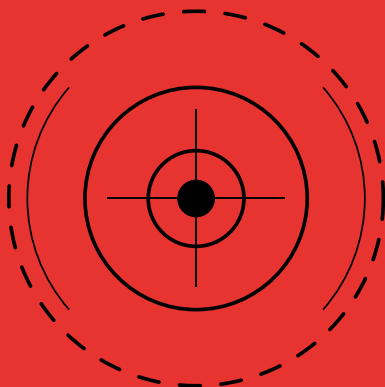


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94 – 95

TEMPORARY

SARAH JAVED SHAH
CARLA RIZZO



Tool | Photoreportage

Reportage photography or photo-reportage is a documentary style of photography that captures a moment or event narratively, i.e., images telling a story. In recent times, it has been experimented with in diverse ways as a research tool in architecture and urban studies; to narrate a story of a place and its characteristics or to illustrate the relationships between people, spaces, and the state of a particular urban condition. Unlike traditional styles of photography, reportage photographs are often less formal and portray their characters in a pose-free manner, that occurs naturally, not staged; giving spontaneity to the documentation of urban phenomena to establish a specific urban thesis.

To explore the "temporary" regeneration of urban space, the new Piazza Spoleto is selected from the ongoing community-driven project of Piazze Aperte in Milan. It was conceived in 2019 as a temporary use space in the NoLo district; a new multi-cultural neighbourhood located in zone 2 of the city in the north-eastern area which has recently gone through a wider process of redevelopment. In place of a pre-existing crossroad of vehicles, the urban space is regenerated, creating 700 sqm of a pedestrianized zone, with the installation of eight new benches, twenty-one pot plants, two ping-pong tables, two picnic tables, and two bike stands.

The tool of photoreportage narrates the events and activities that take place in the square. It is developed according to a daily observation over the course of one week, at different times and moments. Most of the observed activities occur recurrently, slightly varying over the weekends and weekdays or mornings and evenings. The tool describes that the temporary transformation of the square is well recognized by the local people for everyday use. However, its deteriorating state, such as fading away of asphalt pigment and excessive graffiti on objects, demands better maintenance, or perhaps, proposes to be converted into a permanent use space.

FALL 2019

drawing of pattern, elimination of curbs, removal of site clutter, and beginning of painting



FALL 2020

a successful public space for everyday use as evident by various activities of people



2022

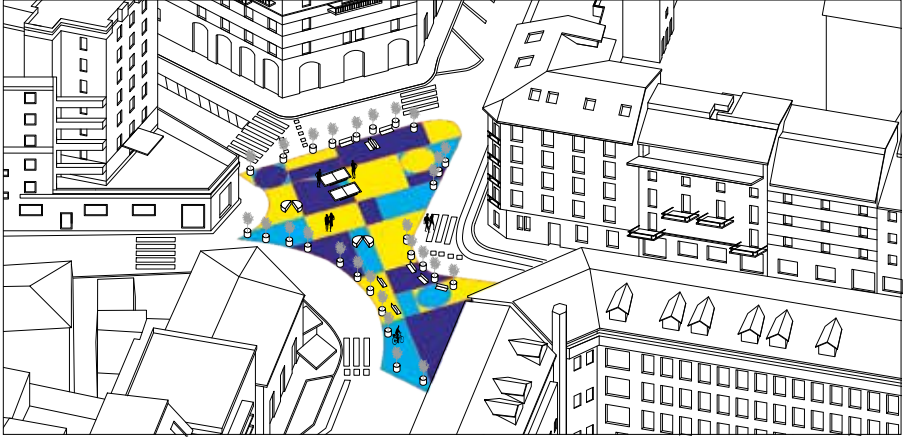
fading away of asphalt pigment, and excessive graffiti on objects and floor



TEMPORARY

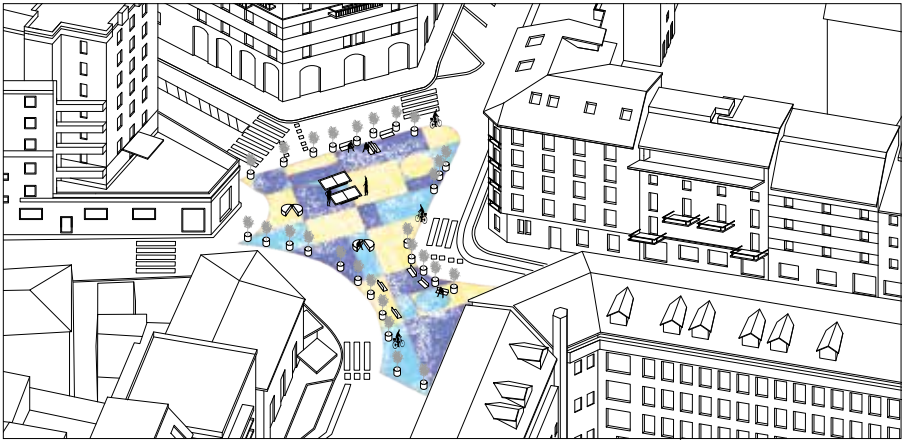
SPRING 2020

painting with asphalt pigment, installation of benches, pot plants, pingpong tables, and bike stands



2021

fading away of asphalt pigment and excessive graffiti started appearing on objects



2023?

future? calling for a permanent transformation?



Temporary refers to something that is not permanent, existing or effective for a short time only. Based on the most common definitions, it denotes to be *lasting or intended to last or be used only for a short time*. Its roots are in the Latin word *tempus*, meaning 'time or season'. Synonymous with transient or transitory, it "implies an arrangement established with no thought of continuance but with the idea of being changed soon" (Collins English Dictionary 2019).

The idea of temporary has recently been much discussed and explored in the field of architecture and urbanism. The discourse includes terms like ephemeral, provisional, interim, and temporary to be used interchangeably. For example, Robert Temel describes temporary as something between ephemeral and provisional (Temel 2006), while Pogoreutz intends temporary as something that is "limited in time of their own accord" (Pogoreutz 2006, 77). Moreover, Bishop comments that in the United States "interim use has no precise definition as a planning term" (Bishop and Williams 2012, 44), and describes temporary land use as "an intentional phase" where the "time-limited nature of the use is generally explicit" (Bishop 2012, 5). Hence, something is considered temporary if it intends to change.

Recent practices of urban regeneration have focused on creating temporary use public spaces to enliven less-used or abandoned sites, and to offer the local people venues for various communal activities. Many temporary projects have presented the benefit to the city and were developed to go beyond the mere temporary use; associating the concept of 'temporary appropriation', oriented toward a more sustainable change. Fonseca

Rodriguez (2015) defines temporary appropriation as "the temporary act in which people use public spaces to carry out individual or collective activities other than the purpose that the space was originally designed for". It allows people to reshape and redefine urban spaces for their own needs and uses, rather than simply accepting the constraints of the built environment.

Moreover, short-term, low-cost initiatives on underutilised or vacant urban spaces, aiming at revitalising community life for socio-economic gain are categorised under 'temporary urbanism'. These initiatives can range from formal (top-down) projects of improvement of underutilized or abandoned urban spaces, commissioned by developers and commercial operators, to less formal (bottom-up) self-initiated by creative practitioners or community-driven transformations, such as street makeovers and neighbourhood gardens. In the early 2000s, a research project "Urban Catalyst" investigated the temporary use scene, intrigued by the contradiction between formal planning and the power of informal public use. Their research established that the value of temporary-use is less about the formal or spatial qualities of urban spaces and more about the processes which enable people to use them spontaneously and freely (Oswalt, Overmeyer, and Misselwitz 2014).

In general, temporary use reflects "a manifestation of a more dynamic, flexible and adaptive urbanism, where the city is becoming more responsive to new needs, demands and preferences of its users"; moreover, and in direct connection with the previous consideration, temporary urban phenomena and their increasing

success, should force to question whether the traditional regulatory and planning systems, are still suitable to intercept the real needs of communities (Bishop and Williams 2012, 21).

New terminologies, such as 'pop-up', 'short-term', 'interim' and 'meanwhile' has become a part of the common vocabulary to describe such innovative forms of temporary-use of urban spaces, unfolding several creative possibilities. For instance, the creation of temporary green spaces 'pop-up parks' addressed to reactivate abandoned and dismissed spaces, as it was done in 2005 in San Francisco, California, with the well-known "Park(ing) Day" project. Firstly born as a two-hour guerrilla art installation with parking spots replaced by grass turf, benches, and potted trees. The practice gradually gained recognition and spread across many cities around the world, with a shared aim to reclaim public space against the car domain on the land.

One of the most significant forms of temporary urban practice is called 'tactical urbanism', advocating the idea of a short-term action for long-term change (Lydon and Garcia 2015). It is defined as "a city and citizen-led approach to neighbourhood building using short-term, low-cost, and scalable interventions intended to create long-term change" (Lydon and Garcia 2015, 5), with a powerful impact on the different stakeholders involved. For citizens, it allows the immediate reclamation, redesign, or reprogramming of public space; for developers, it provides a means of collecting design intelligence from the market; for advocacy organizations, it's a way to show what is possible to garner public and political support; and for government, it's a way

to put best practices into action. These aspects are significant for the long-term urban regeneration in favour of sustainable cities.

With temporary uses and occupations operating long and successful enough to become a neighbourhood asset, any attempt by governments or by landowners and developers to take the reins of the urban transformation in future, following different rules by the ones 'temporary' established will likely be met with resistance by community members (Nemeth 2014, 147). This fact should clarify how "only when it is understood that those who build and sustain urban life have a primary claim to that which they have produced and that one of their claims is to the unalienated right to make a city more after their own heart's desire, will we arrive at a politics of the urban that will make sense" (Harvey 2012, xvi).

Temporary urban practices often aim to generate a dialogue with authorities, to bring their attention to peoples' needs and demands, and to gain support for investing in making these projects permanent to experience and shape urban spaces in new ways. For these reasons, the same authorities should take into serious consideration the temporary use model as a powerful experimental tool for a preliminary planning phase, "to encourage more realistic, pragmatic, and incremental approaches to urban transformation, moving outside (or even in parallel) to the institutional tendency to master plan larger inflexible projects based in idealized models of urban systems" (Nemeth 2014, 149). The difference in the approach to urban regeneration, and the methodology applied, could be properly explained through De Certeau's (1984) words; in

fact, he differentiates a 'strategy' from a 'tactic'. A strategy, De Certeau writes, is "the calculation (or manipulation) of power relationships that becomes possible as soon as a subject with will and power [...] can be isolated", and this turns our minds to a top-down attitude. On the other side, a 'tactic' is a "calculated action determined by the absence of a proper locus [...]" The space of a tactic is the space of the other". The idea of the absence of a proper locus relates also to the replicability of temporary urbanism: it is common to apply the temporary use model to different contexts with the same characteristics (as in the case of dismissed and vacant lands) and to spread it to different places, to different cities and countries. Again, in De Certeau's words, a tactic "operates in isolated actions, blow by blow. It takes advantage of opportunities, being without any base where it could stockpile its winnings, build up its own position, and plan raids" (De Certeau 1984, 35-39). There are several good reasons why the interest in temporary uses has intensified recently, as reported by Bishop and Williams (2012). The current economic system produces and supports models of urban regeneration that are always more unsustainable, promoting and facilitating almost entirely private developments, relegating the public quote to a minimum to be guaranteed to contrast the uncontrolled construction of productive buildings, prone to monetize and to foster

the commercial aspects. The increasing demand for alternatives and adaptive strategies should be read as an indication of the will to contrast the most common trends in urban regenerations, and even if their engraftment and success are constantly challenged and undermined by the capitalist model, it won't be fair to ignore the attempt. The "Piazze Aperte" project developed in Milan in 2018 represents an attempted compromise, seeking to create a congenial negotiation between community and municipality. The revitalization of abandoned and vacant spaces all around the city, through the tool of tactical urbanism, attempts to return public spaces to people, creating new places for socializing and connection (Comune Di Milano 2020). Despite the gallant intentions, it is irrefutable that processes without clear capital gains are mostly considered secondary to other profitable commercial real-estate operations. Hence, the compromise is often sacrificed, lacking the long-term prospects, leaving behind these kinds of urban regeneration projects in their temporary phase, with continuing deterioration and devoid of the possibility to upgrade to a more permanent condition. Nevertheless, it is significant to keep the consideration on these alternative temporary-use practices, to create awareness, and to compel the authorities to pay attention to the people's needs and aspirations towards their cities.

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WALKING

Crossing through Space



CYCLING

Crossing through Space



SITTING

Relaxing in Space



8:00/11:00

11:00/14:00

TEMPORARY



14:00/17:00

17:00/20:00

PLAYING
Enjoying in Space



EATING & DRINKING
Using the Space



SOCIALIZING
Interacting in Space



8:00/11:00

11:00/14:00

TEMPORARY



14:00/17:00

17:00/20:00

Norcia, adaptation after
the earthquake, August
2019. © Giulia Setti



IN SEARCH OF ADAPTATION

EXPLORING DESIGN TOOLS AND THEORIES

GIULIA SETTI

Choosing a word to describe a phenomenon or a design orientation is not an easy condition, it requires you to carefully select the object to be analyzed and, subsequently, try to identify the tools associated with it and the design conditions that may arise.

The research that holds together the essays and exercises of this volume starts from a title, which I believe can well define the scope of the discussion, *Design Processes for Transition*, which relates the project, the processes, and the transition, that are the changes that increasingly affect architecture. For this reason, in choosing a keyword that could make a critical contribution to the current contemporary debate, I decided to work on the concept of “Adaptation”. The lexicon that tries to describe the difficult relationship between architecture, climate crisis, and sustainability has often been abused, starting, perhaps, with the word most used in recent years, resilience, to describe every form and possibility of change, able to survive to the alternation of adverse conditions, or new (Gunderson, Allen, and Holling 2009). Adaptation tries to shift the mainstream vocabulary on the subject to provide a different interpretative lens, which starts from an important



assumption: today, in the contemporary era, architecture must learn to change itself, to adapt, in a much faster time than what did not happen before, because the speed of changes—natural, climatic, social—is faster, and because technological advancement allows the use of new materials and solutions to improve the comfort and sustainability of buildings and public spaces.

Theoretical positions

The meaning and etymology of the term *adaptation* derives from the verb *to adapt*, in turn arriving from the Latin *ad-* and *aptare*. It brings together different meanings: first of all, it represents the ability to make something suitable for a particular purpose and it could be applied to an object, a person, or a situation. (Setti 2019, 29). And, therefore, it underlines the aptitude to transform, the ability to modify the previous conditions in which we find an object, a space, or a building.

The idea that seems most interesting to me in creating a relationship between adaptation and architecture is that, on the one hand, transformation opens up a state of continuous innovation; on the other hand, adaptation means establishing a new balance after a violent episode, a shock, or following an unexpected event. Adapting could mean building with local materials, reducing waste, and minimizing the impact on the environment, or it could mean recovering and recycling, modifying parts, and obtaining new objects and materials.

In recent decades, a large literature has tried to investigate and study the relationships between climate change, sudden and often violent events, and architecture, precisely to try to propose, where possible, new responses and design strategies. The monographic issue 170 of the magazine *Lotus*, *In response to disasters* (2020), collects a series of cases that have challenged the relationship between time, architecture, and ruin, highlighting how unexpected and sudden events compromise buildings and the life cycle imagined at the act of their construction. But the contribution that many authors are developing in trying to define the implications that future, ever closer, climate changes will bring to our cities, and the forms of coexistence that we will have to experience, appears even more decisive (Morton 2016).

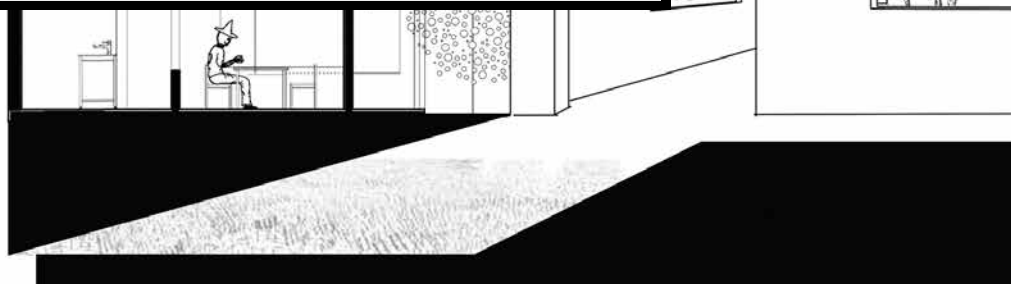
The need to adapt emerges precisely as a result of extreme situations that mark, in fact, the era of the Anthropocene, in which we live, which indicates the set of physical, chemical, and biological conditions that are strongly conditioned by the effects of human action (Treccani 2016; Bonneuil, Fresco 2016; Morton 2009). An interesting, and impressive, exhibition held at MAST in Bologna,¹ in 2019, investigated the indelible footprint of man on the Earth, an increasingly permanent and non-negotiable footprint that, for decades, has been transforming the planet without preserving its ecosystem and its resources (Hackett, Kunard, and Stahel 2018). The definition and analysis of a form of post-anthropocentric theory, which highlights the break with the traditional distinctions between what is human and the rest, has been introduced, a few years ago, by Rosi Braidotti's studies on Post-Human (2013) and its effects on the planet. If the practices of genetic modification of food, robotics, and reproductive technologies have become common, it can be hypothesized that the distinctions between different species, between humans, seeds, plants, and animals, are gradually becoming more blurred and that could give life to new forms of adaptation and sustainability (Braidotti 2013).

The changes underway, and the theories that are associated, tell of the need for architecture to adapt to the new needs of living; we are, perhaps, witnessing a radical transformation of the types and archetypes we are used to. The book *Posthuman Architecture: A Catalog of Archetypes* (2021) explains it well, which identifies a series of new spaces that we will inhabit in a near future: the ark, the nest, the forest, a starship, a biotope (Leveratto 2021). Imagine a world where man, to overcome climate change and scarcity of resources, will be forced to return to inhabit nature and forest, or build new residential typologies (the nest, the starship), rediscovering and welding a new pact with the nature.

Adaptation: a set of categories and design tools

The definition of some design categories within which to analyze the relationship between architecture and adaptation is a first step to identifying relationships, and meanings that can be intertwined. In doing so, the essay establishes some autonomous and independent

1. The exhibition entitled "Anthropocene" collected images by Edward Burtynsky, Jennifer Baichwal, and Nicholas de Pencier, and has been hosted at MAST in Bologna from May 16, 2019, to January 5, 2020.



connections, the result of ideas or details that capture references between different projects. It is obviously not a scientific reading but, on the contrary, a way to identify new ways of reading projects that, already several decades ago, began to question adaptation and the rapid transformations of architecture.

The essay explores three possible ways of acting. The first—*Prototypes / Visions*—looks at projects that, in a visionary way, have tried to imagine new forms of adaptation; the second—*Reusing and Recycling*—observes projects that have been able to reuse ruins and fragments of past lives; finally, the third category—*Flexibility and Temporary*—investigates projects that have worked with typological flexibility, with the uncertainty of materials and resources, with environmental fragility. They are to be imagined as broad categories, which can, over time, grow and incorporate other projects and research; more generally, they propose a key to understanding the instability of design in the face of current conditions, rediscovering how, even in the past, the ability to adapt has represented a significant design strategy.

Prototypes and Visions

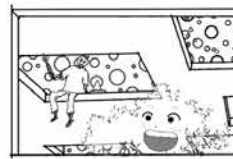
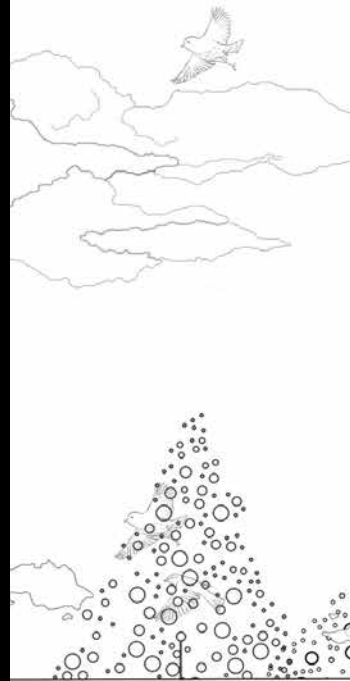
The idea to select projects that experiment with prototypes to respond to processes of change arises from the possibility of identifying “first examples”, unique attempts, or models that will probably require refinements and other tests (Tognon 2019, 43), but which are the first to experience new opportunities. The prototype, when applied to architecture, represents the abstraction and simplification of a problem; it tries to highlight the essential aspects that can be emphasized.

The research that Toyo Ito carried out on the topic of nomadic living in the 1980s is an example; the projects *Pao I and Pao II: Dwellings for the Tokyo Nomad Woman* (1985 and 1989) are prototypes for domestic and intimate accommodation, based on a scenario in which most of the domestic functions dissolve in the metropolis and, therefore, the housing unit becomes a small, almost immaterial entity, which provides the minimum necessary shelter and access to the network (Fabrizi 2016). It is interesting the foreshadowing that Ito makes of the future metropolis, starting with the city of Tokyo, one of the most

technologically advanced places already in the 1980s; the proposed experimentation imagines a radicalization of nomadism and, therefore, a necessary adaptation of the house that transforms into a light and ephemeral architecture. The house is imagined as a dissolving curtain that will be reduced to a series of objects arranged in an intangible space. Architecture becomes a set of surfaces that could project information from the outside, like a membrane that separates and protects the intimacy left in the house. The images of the critical utopia of the “Supersurface” imagined by Superstudio in 1972 take the idea of the evolution and transformation of the world, as we live and know it, to its extreme consequences. They push the representation of the change taking place to the maximum, trying to modify the static image of cities to propose, on the contrary, a hybrid, physical, and mental nomadism.

“Supersurface” is elaborated in the form of a film and demonstrates a pungent originality; in the edited frames, boundless domestic spaces emerge floating on an infinite white grid. This is the *supersurface*, a network of services, a global printed circuit that replaces the built environment, made up of single architectures, with a continuous landscape on which people can move and roam nomadically, connecting to the resources of the grid according to their respective needs (Angelidakis, Pizzigoni, and Scelsi 2015).

The perspective imagined by Superstudio is radical and visionary; the technical infrastructure hidden beneath the Supersurface opens up a new lifestyle but, at the same time, represents a primordial omnipresent control system. Surely without limits and boundaries, Superstudio’s representations question the static nature of architecture and, partially, its sacredness, proposing radical and often controversial adaptations, if we think of the proposal for the Monumento Continuo, Grand Hotel Colosseo of 1969, which presents the extension of the Colosseum, thanks to the superimposition of an oval volume of five floors devoted to becoming a luxury hotel. Adaptations that marked Superstudio’s design and aesthetic horizon, which is not only that of a visionary utopia but also of a continuous and radical questioning of reality.



2. Concerning the PRIN (Project of Relevant National Interest), *New life cycles for architecture and infrastructure of the city and the landscape*, is a national research coordinated by Renato Bocchi (IUAV), and composed by 11 Italian universities.

Reusing and Recycling

On the other hand, the radical and, partially, utopian transformations of the previous category are accompanied by a modality of action increasingly used in recent decades which envisages the recovery and adaptation of abandoned or under-used buildings, guaranteeing them a new life cycle. The season of the *recycle* in the architectural field has been revolutionary and capable of marking a new design condition; in 2011 an exhibition at the MAXXI in Rome curated by Pippo Ciorra and Sara Marini, *“Re-Cycle. Strategies for architecture, the city, the planet”*, for the first time has systematized interventions, projects, research that had recycled and reused existing architectures, modifying their language, adding volumes and parts, changing their functional program. The idea of recycling was, therefore, investigated in unprecedented forms, both thanks to this exhibition, both thanks to a national research project conducted on the same topic;² recycling has been conceived as a creative strategy to be applied to the existing, often underutilized, heritage to define new forms of architectural, landscape, and urban experimentation (Ciorra and Marini 2011).

But Cedric Price had already tried to reflect on how to intervene and recover existing buildings; Price illustrates six strategies for transforming a building; they are simple design operations ranging from the addition of a volume to connection, to partial demolition or extension. They show us how adaptation is a necessary condition especially in a situation, such as the current one, where too much has already been built and where it becomes necessary to adapt buildings, still in good condition, to accommodate other functions or activities. Recycling becomes a practicable design option that could reduce the footprint on the planet and optimize the resources already used. An emblematic project of this research, and much revived in recent years, is the *Dovocote Studio*, built by Haworth Tompkins in 2009, which recovers an old industrial ruin through a replacement operation. The brick ruins of pre-existing buildings have been transformed by inserting a new volume, clad in corten steel, whose structure is separated from the ruins but ideally completes the existing envelope. The new building, intended to accommodate artists and musicians, is a

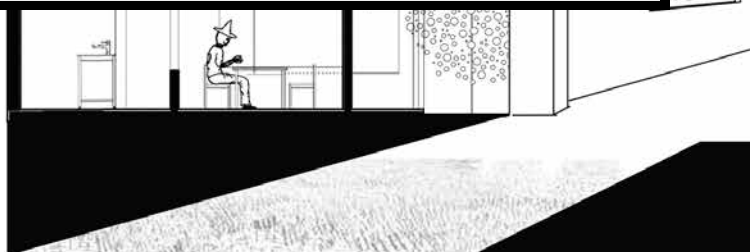
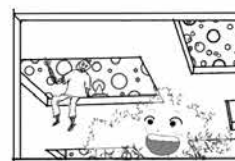
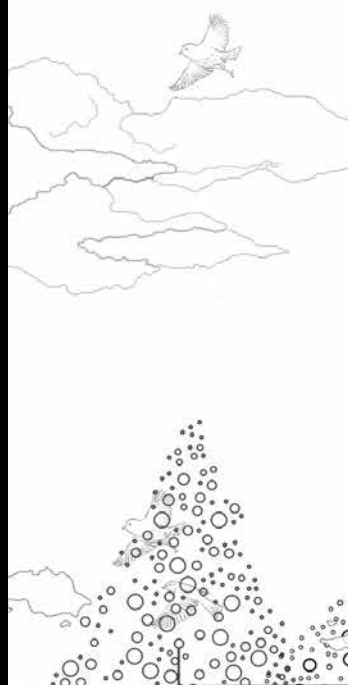
small rectangular volume with a pitched roof, made with prefabricated panels that have been assembled on site and then lowered into the ruins once stabilized. The dovecote ruins have been entirely preserved, and the windows have been left intact as well as the vegetation that continues to grow spontaneously between the bricks, this to allow and maintaining the natural aging process of the material. The volume, therefore, stands out in contrast to the ruined bricks, detaching itself from the existing but, at the same time, establishing a new relationship between the new and the old (Haworth Tompkins 2009). Although small in scale, this project has become an icon of a series of interventions that used the ruins as a design material.

More recent and interesting for its ability to adapt an old shopping center that has fallen into disuse is the *Tainan Spring* project, carried out by MVRDV in Taiwan in 2020. The former shopping center has been transformed into an urban lagoon surrounded by a system of plants that will reconnect the city to nature and its waterfront. The China-Town Mall, built in 1983, shows what possible solutions are feasible to recover unused shopping centers, a rapidly growing process if we think of the changes in purchasing methods that have taken place in recent years. The shopping center has been demolished and completely recycled; the underground level of the car park hosts a submerged public square dominated by an urban swimming pool with plants and trees.

The structure of the shopping center, in concrete, has been deconstructed, but some follies remain which, over time, can be converted into shops and other small services. In fact, some traces of the pre-existing structure have been kept which allows preserving the memory of the past, giving up the *tabula rasa* but adapting the leftover of the building to the new function of a public park. The two approaches described are just some of the possible reuse design strategies but show the need to understand and select what to keep and how to adapt traces and ruins to contemporary needs.

A question of time: flexibility and temporary

Time takes a central position in the relationship between architecture and adaptation; adapting is, in fact, an action that requires certain



transience and that does not take place immediately but, on the contrary, moves in small steps and in successive phases.

In identifying categories that describe the relationship between these two topics, a space must be dedicated to those projects that assume adaptation, and, therefore, flexibility as a design element. The ones described in this essay are obviously a partial story, but they identify some interesting strategies, which can accommodate numerous other projects.

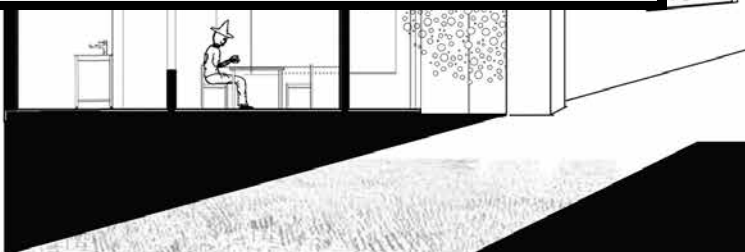
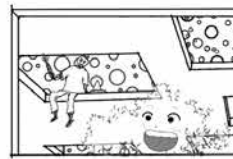
Flexibility and temporariness indicate unstable conditions that can, at a certain moment, stabilize. Junya Ishigami expertly uses them in the project for the *Art Biotop Water Garden* in Tochigi, Japan, completed in 2019. The reconstruction of a new forest is an act of extreme force, done by transplanting 318 trees from the place where the forest originally stood, which will instead be transformed into a hotel. The transfer of the trees to the neighboring lawn overlaps the layers of the history of the previous environment and different landscapes that had never touched each other, blend together. The precise design of the different landscapes intertwines and merges, revealing the need to adapt to each other in search of a new and artificial balance. Ponds and trees are arranged with a certain density, which is not normally found in nature, while moss is willing to fill the spaces in between (Yoneda 2021). The hand of man shapes the architecture of nature, adapting it to new needs that would otherwise have led to the felling of trees and which, instead, are thus preserved.

Flexibility also affects forms of contemporary living; new typological experiments are emerging that modify the spaces of the house facing renewed housing needs; the house changes its spaces and welcomes new requests for work and sharing. The essay highlights two projects that, in my opinion, raise significant questions with respect to the new condition of the home and the flexibility of living. The first is the *Social Housing project in Mulhouse*, built by Lacaton & Vassal between 2001 and 2005, the complex of 14 two-storey residential units is part of a larger scheme that involves the construction of 61 buildings to expand the city of Mulhouse. The idea is to build a simple, cheap, and efficient structure to ensure the maximum available surface and

volume, with different spatial qualities. The houses are placed inside a single translucent container that has as its reference the greenhouse, a light metal structure with polycarbonate panels. On the ground floor, a structure of pillars and concrete beams supports a three-meter-high platform on which a series of greenhouses are built. Each residential unit, of the 14 planned, guarantees cross ventilation and each unit is different from the other so that the inhabitants can easily adapt it to their needs and habits. Lacaton & Vassal transform the idea of the conventional house, proposing flexible and typologically differentiable apartments that use the greenhouse device, insulated and heated on one side, ventilated winter garden on the other, as a habitable extension that provides light and air to the house (Lacaton & Vassal 2005). More recent, and equally innovative, is the *Empower Shack* project by Urban-Think Tank, built in Cape Town, South Africa starting in 2015. The idea, developed together with the cooperation between U-TT and the local NGO Ikhayalami, is to define a prototype of open-source housing that can constitute a model for the upgrading of informal settlements in South Africa; a replicable prototype that improves the living conditions of the inhabitants. The project, still in an experimental phase, aims to enhance informal settlements by providing: a two-storey housing prototype obtained thanks to a participatory process with the inhabitants, integrated urban systems, and affordable and accessible housing solutions (Urban-Think Tank 2016). The pilot phase saw the construction of four residences in 2015, to which 16 were added, built in 2017, to test the housing model and its adaptability that leaves flexibility in the management of the housing spaces to the inhabitants, while preserving some aspects of informality that represent the identity of the place. In both projects, the tension towards innovation in housing projects could be seen both in the typological study proposed by Lacaton & Vassal and in the study of the design process and materials applied by Urban-Think Tank.

Opening research perspectives

The categories presented in this essay, and the selected projects, represent a partial and subjective collection, which tries to identify new



ways of reading the relationship between architecture, adaptation, and crisis (environmental, social, economic). The vision and the perspectives that open up underline how the project must respond to new and different needs, such as the ability to adapt to sudden changes, the need to explore and use new materials and local resources, flexibility, and typological innovation. These are just some aspects that have changed and that require current design responses.

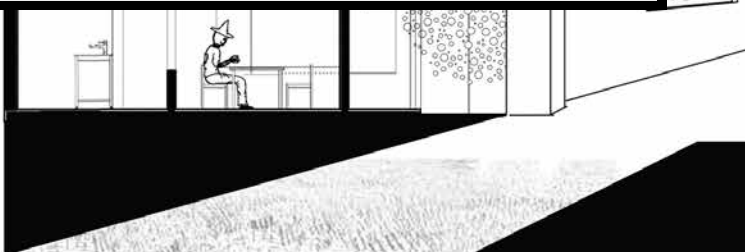
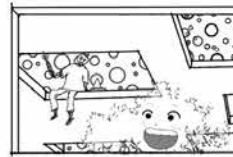
Like any form of cataloging, it is impartial and, in part, reads, already known projects, with different lenses. However, it seems important to me to emphasize how the transition we are experiencing can represent an opportunity for design innovation, a way to update tools, theories, and processes that define a project.

The work carried out during the workshop *Design Process for Transition* has represented an important moment to study some of these changes and to select projects, rather than theoretical positions, which have assumed this change as central.

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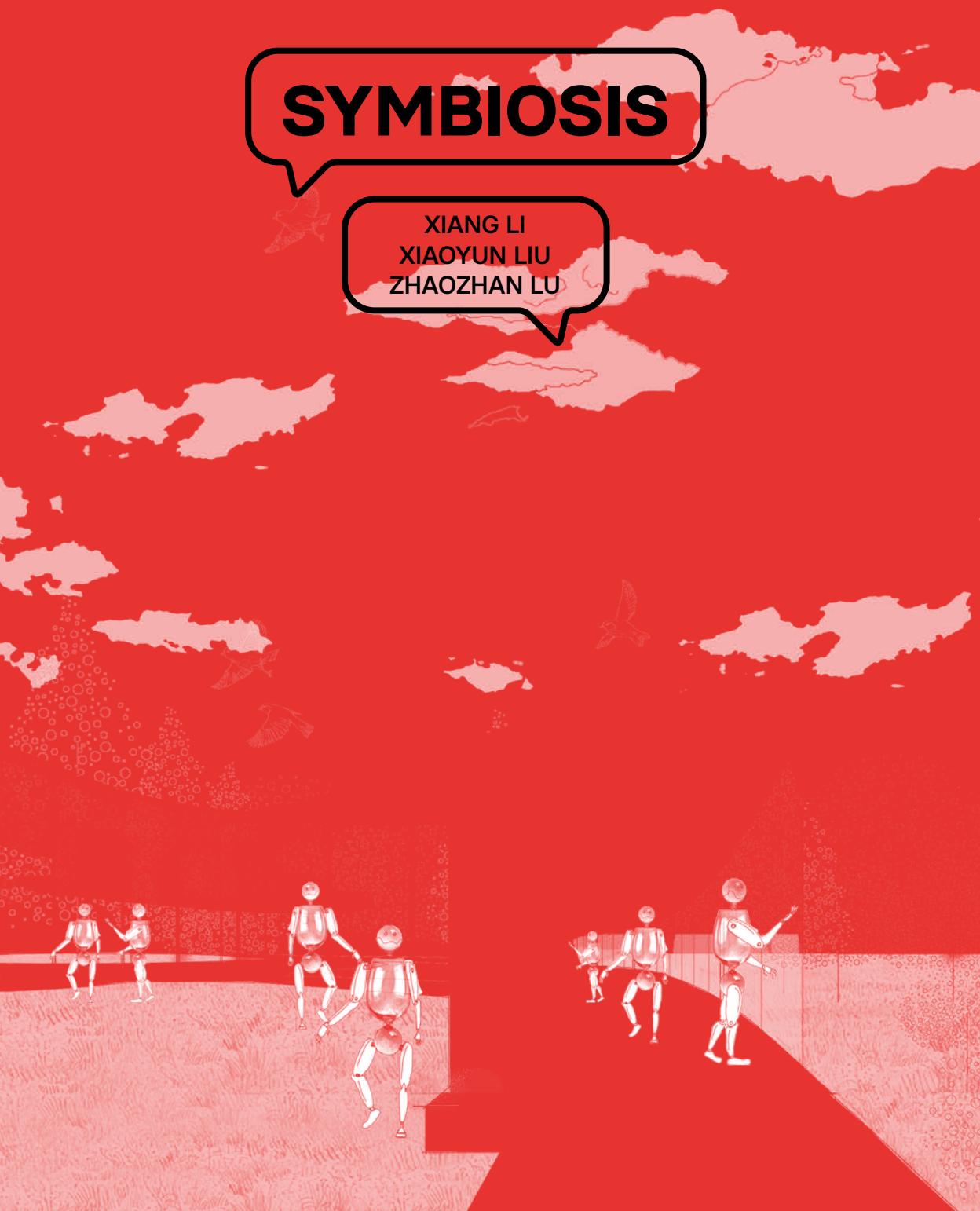
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118 – 119

SYMBIOSIS

XIANG LI
XIAOYUN LIU
ZHAOZHAN LU



Tool | Visual narrative

By their narrativity, images such as photos and comics are adopted for shaping and telling stories visually with profound thinking to the audience, including the architectural discipline. Works such as *Delirious New York* by Rem Koolhaas, for example, these visual narratives are also appropriate architecture communication tools to investigate architectural issues and vividly express architects' design concepts and progress. Therefore, this research uses visual narratives to explore and explain the characteristics of symbiosis architecture in Japan. This decades-long evolution could be presented progressively by the tool of visual narratives through comics in chronological order.

Via comics, the research:

1. collages the representative projects to present the common features in each stage, from mechanical bodies with replaceable units to more transparent and flexible architecture that interacts with circumstances and emphasizes individuals;
2. reveals the social and natural contexts of different stages to correspond to architecture, from large-scale mechanized construction to natural surroundings;
3. metaphorically characterizes the relationships between humans, architecture, and nature by the robots and dialogues, to show that humans seem to be passive recipients, underestimating the response from users and involved creatures.

In this evolution, the architecture transferred from ignoring to emphasizing individuals and nature.

The term “symbiosis” in architecture comes from biology, defined by De Barry in 1879 as “a phenomenon in which dissimilar organisms live together” (Oulhen, Schulz, and Carrier 2016, 132), referring to the interaction between two different organisms living in close physical association, typically to the advantage of both by self-adaptation. Japanese architects introduced it to their architectural contexts as symbiosis is a key concept in understanding Japanese culture (Kurokawa 1994, 7).

Cities have long been compared to living organisms (Šijaković and Perić 2018, 68), Sullivan, Wright, Le Corbusier and others analogized architecture to living organisms and developed the organic theory of architecture (Šijaković and Perić 2018, 69). In Japan, Kisho Kurokawa began to adopt the concept of “symbiosis” in the 1970s, as it biologically includes opposition and competition rather than only coexistence or peace, which is believed more proper to describe the pluralism and diversification of the postmodern era.

Influenced by Japanese Buddhist education, his symbiotic theory embraces philosophies including Tomoiki and the Indian Buddhist philosophy of Consciousness-Only, which things are not merely distinguished as binary opposites or pairs, but as an intermediate zone where these pairs exist together in symbiosis.

From Metabolism to Symbiosis

The term “symbiosis”, advanced from “metabolism” by Kurokawa, was inherited from Kenzo Tange. He inspired the following generation of Japanese architects to develop the concept of “metabolism”. It evolved from Modernist

architecture and was characterized by megastructures consisting of a “core” (main framework) and “jointed-together” units, which are individual units, capsules, or cells that can be plugged in, and the core has stronger and longer sustainability than the jointed units (Tamari 2014, 208). The “Tokyo Planning project”, led by Kenzo Tange and participated by his students, including Kurokawa (Helix City) and Kiyonori Kikutake (Tower Shaped Community), illustrates the concept of “metabolism”. The Nakagin Capsule Tower (1972), designed by Kurokawa, consists of 140 interchangeable capsule units stacked together and rotating at different angles around a central core. Another representative project is Sky House (1958) by Kiyonori, adopts the Corbusier-style elevated structure and the internal space drawn on the Japanese open layout to install mobile and replaceable units. “Metabolism” concept aimed primarily to suit the city’s rapid development, but it utopianly regarded cities and buildings as mechanical bodies, detaching from the democracy and freedom in everyday life they promised.

Metabolism was demised in the 1970s since it ignores the dynamic nature of human activity in the city and regards humans as a universal passive component of a systemic framework (Tamari 2014, 209-10). Kurokawa developed the mechanical metabolism into symbiosis in 1970s, with valuing individuals, diversities, and pluralism. He believes that intermediate spaces originate from the traditional Japanese approach to symbiosis, as it blurs internal and external spaces into ambiguous and pluralistic. In The National Art Center (2007), he introduced nature into the interior via intermediate spaces,

setting a winding-curved glass facade. Following generations have inherited and advanced this approach.

Toyo Ito also adopted glass curtain walls as transparent skin to interact with the external environment in the Sendai Media Center (2000) with openness and flexibility of the interior.

The works of Ito and his disciples became increasingly transparent, spatially open, and homogeneous, such as the 21st Century Museum of Contemporary Art (2004) and Louvre Lens (2013) by Kazuyo Sejima and her partner Ryue Nishizawa (SANAA).

Rather than introducing nature, the new generation architects began to "create nature". Besides, their works become lighter and more invisible. Toyo Ito (2002), SANAA (2009), and younger architects Sou Fujimoto (2013) and Junya Ishigami (2019), all designed temporary projects in the Serpentine Gallery in London, and from SANAA onwards, the facades were removed.

Akihisa Hirata, Fujimoto, Ishigami and other new generation tend to create simplified nature within architecture. In Taipei Roofs (2017), Hirata internalized nature and developed architecture as a living organism or eco-system. In House N (2008) and House NA (2015), Fujimoto reflects the complexity and diversity of the natural world via ambiguous spaces with a nested and stacked manner (Fujimoto and Chung 2012). In the KAIT Workshop (2017), via nature-like forms, Ishigami submerged the physicality of the architecture to obtain a new spatial experience, makes the architecture as a natural phenomenon (Ishigami 2018).

Conclusion

In metabolism era, Japanese architects thought that life in the future city could be governed though a centralized system (Tamari 2014, 210), ignoring the subjective humanities within the architecture that components as interchangeable parts of running machines. In symbiosis era, the architecture is transformed into emphasizing the individuals' new experience of living with nature by introducing and connecting nature via intermediate spaces and transparent materials. Furthermore, new generation of architects is trying to innovate simplified nature within their works in the current symbiosis. In this evolution, architecture is weakened and blurred, spaces are emphasized with more flexibility and diversified, the relationship between individuals and nature is considered tighter.

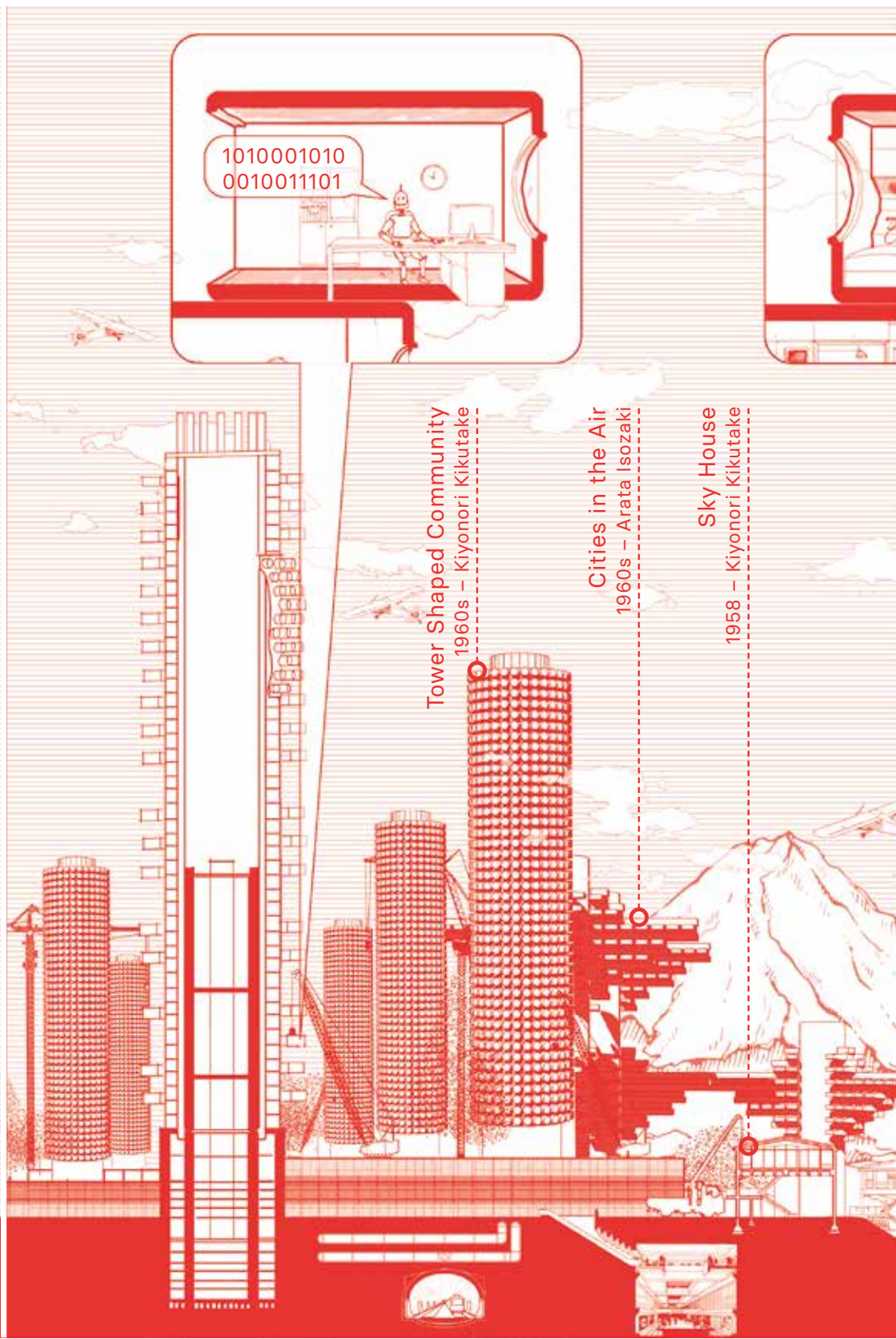
However, rooted in a Japanese culture that places humans in a more inferior position than nature, from metabolism to symbiosis, Japanese architects attempt to achieve a symbiosis between humans and nature via complying with nature, and humans seem to be considered passive recipients, resulting in underestimating the response from users and involved creatures. As long as human technology and the environment continue to produce unforeseen events, these events may escalate beyond our control since today's environmental problems are still intensifying. The agenda for sustainable architecture without disturbing fragile ecosystems but integrating the needs of humans and nature is continuing. The idea of a constant attention to human experience in the evolution of symbiosis may hide with the purpose that nature

essentially serves people, is this a new kind of humanism? How will the long process of human use in their architecture affect the environment?

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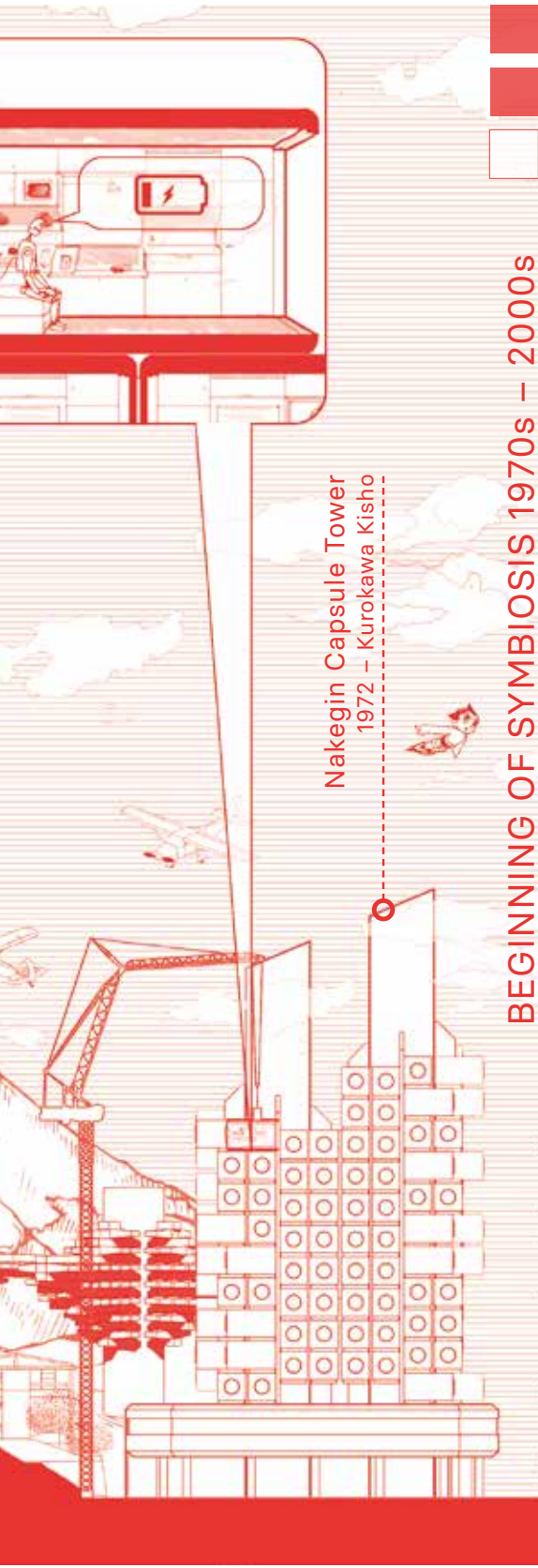
METABOLISM 1950s – 1970s



Tower Shaped Community
1960s – Kiyonori Kikutake

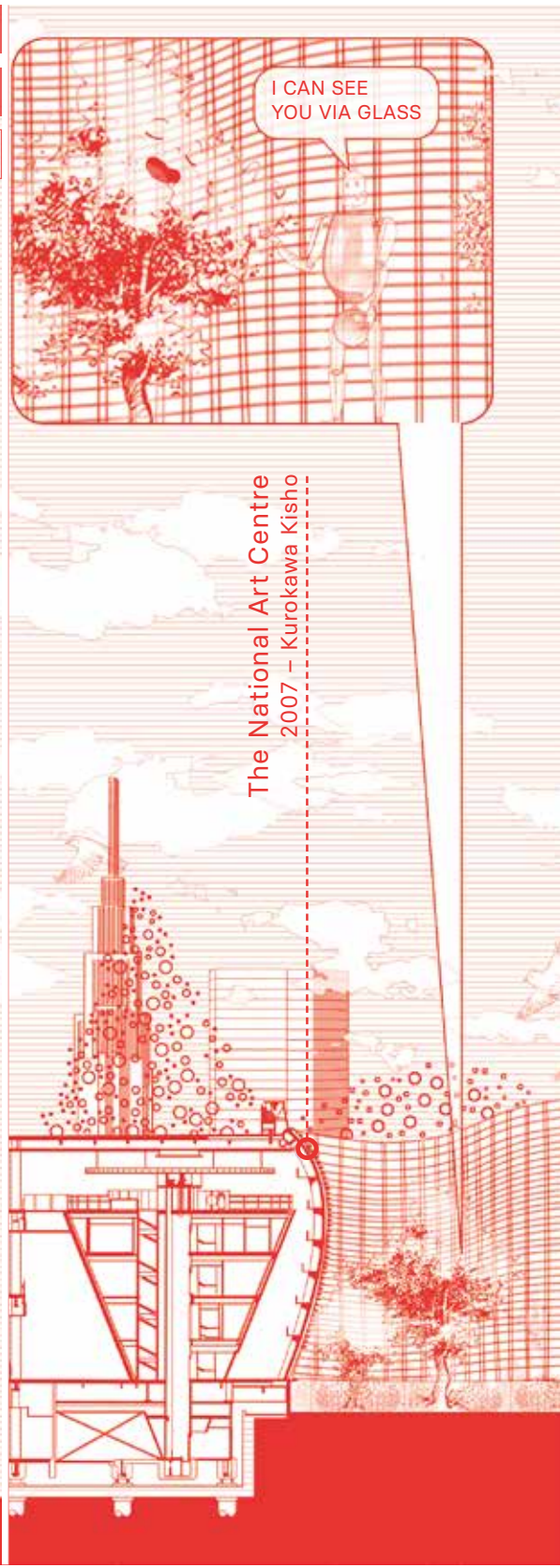
Cities in the Air
1960s – Arata Isozaki

Sky House
1958 – Kiyonori Kikutake

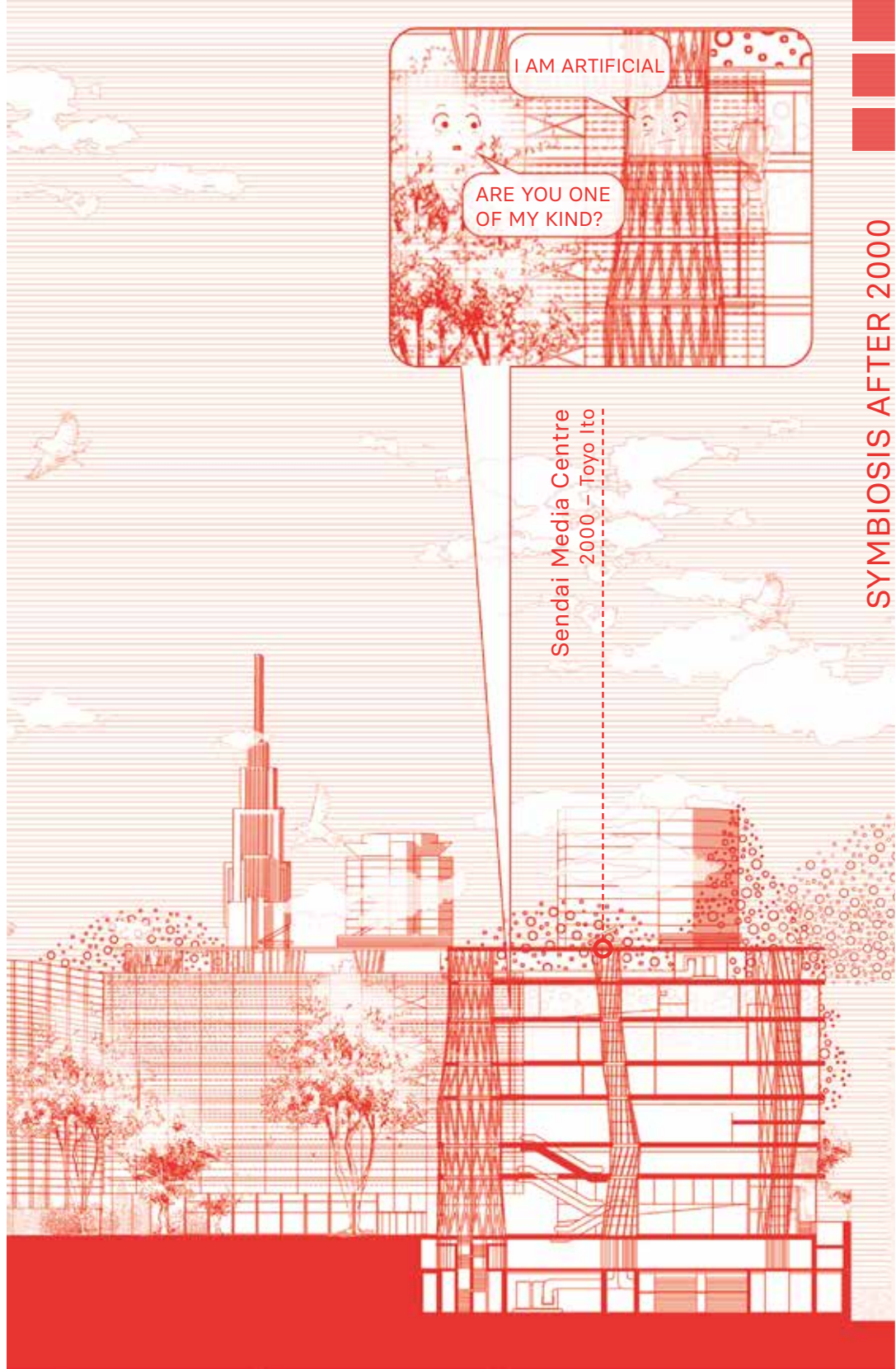


Nakagin Capsule Tower
1972 – Kurokawa Kisho

BEGINNING OF SYMBIOSIS 1970s – 2000s



The National Art Centre
2007 – Kurokawa Kisho

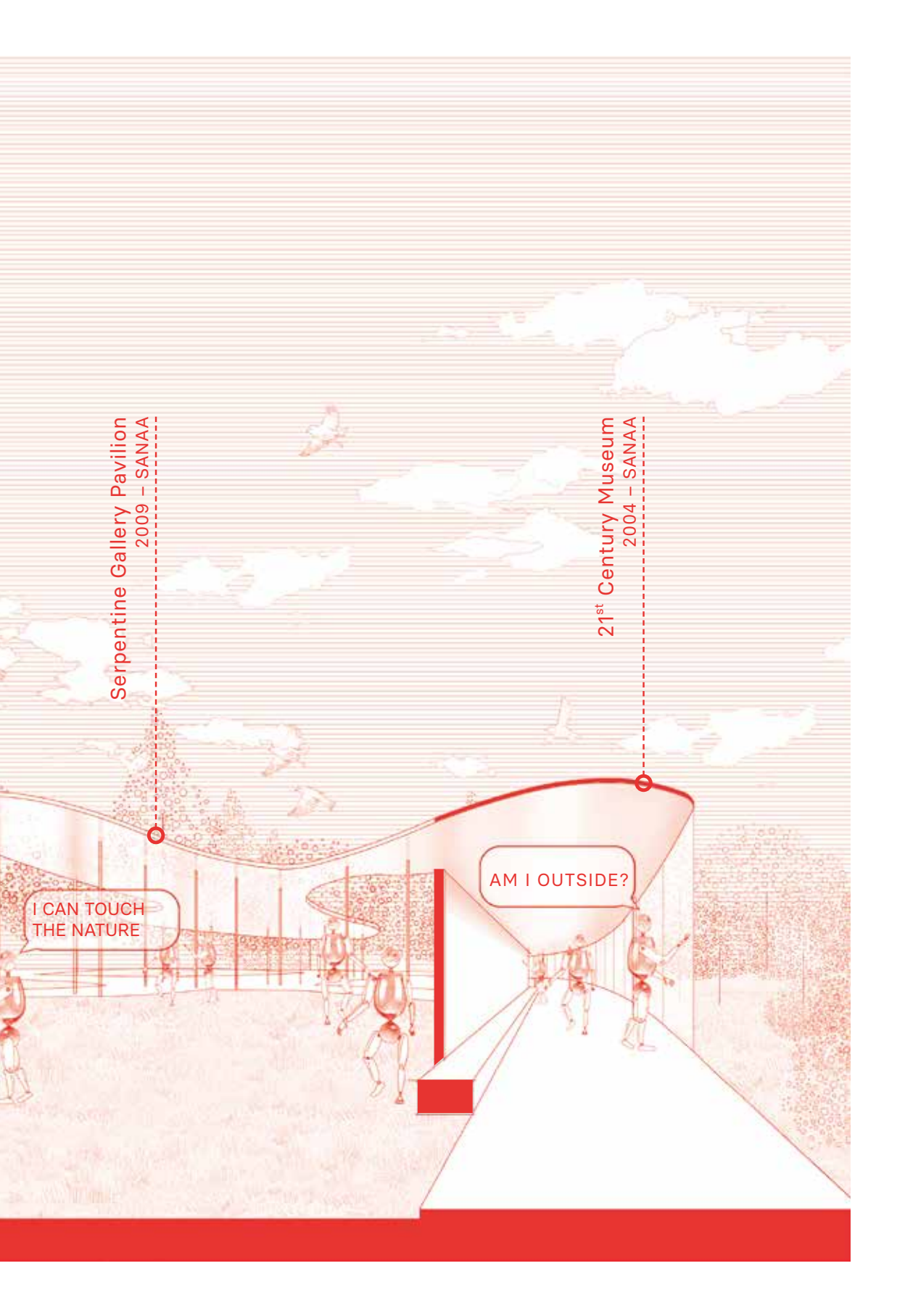


I AM ARTIFICIAL

ARE YOU ONE
OF MY KIND?

Sendai Media Centre
2000 - Toyo Ito

SYMBIOSIS AFTER 2000



Serpentine Gallery Pavilion
2009 – SANAA

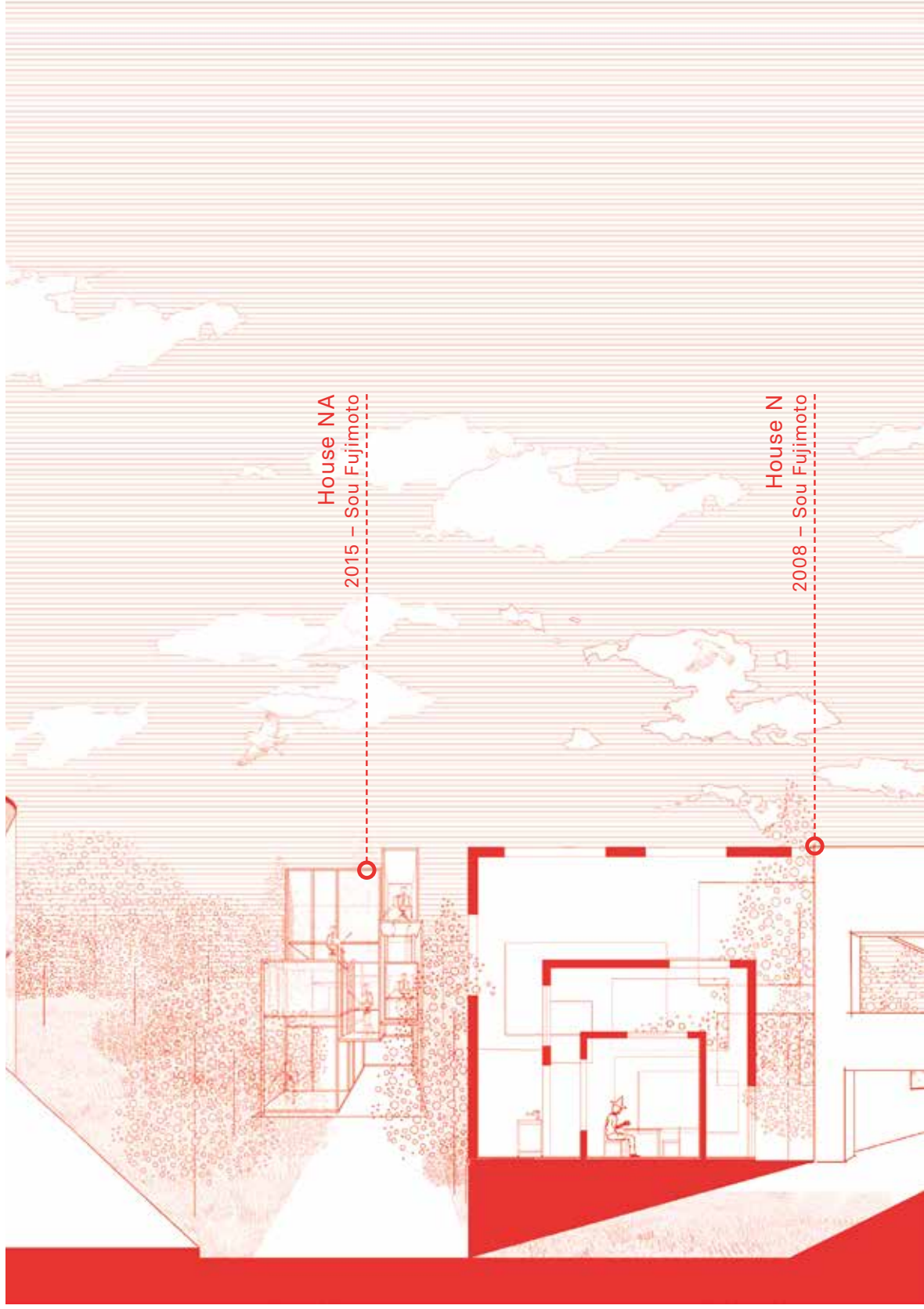
21st Century Museum
2004 – SANAA

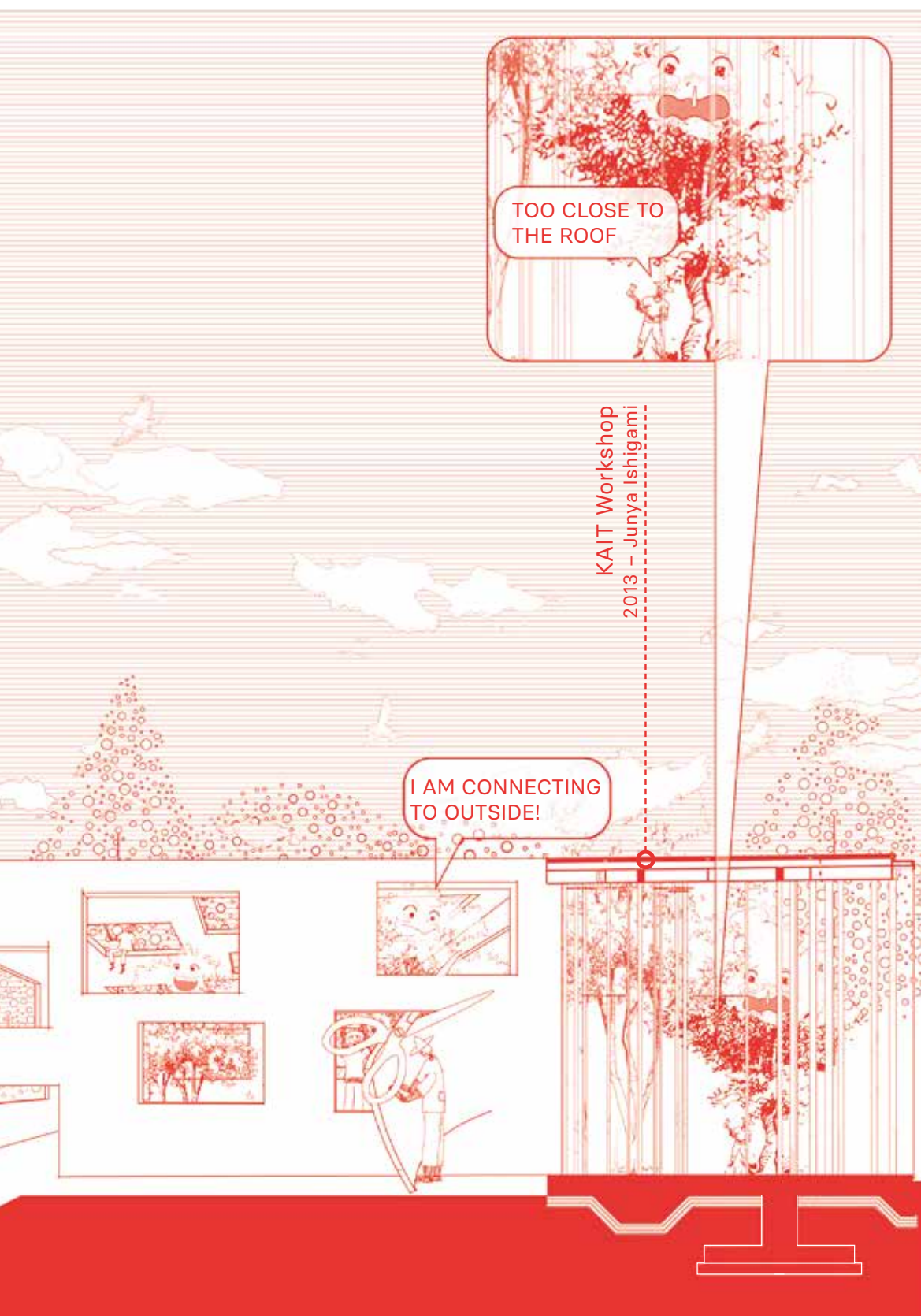
I CAN TOUCH
THE NATURE

AM I OUTSIDE?

House NA
2015 – Sou Fujimoto

House N
2008 – Sou Fujimoto





TOO CLOSE TO
THE ROOF

KAIT Workshop
2013 – Junya Ishigami

I AM CONNECTING
TO OUTSIDE!

CLIMATE/DESIGN CHANGE: REVISITING THE IN BETWEEN IN ARCHITECTURE

STAMATINA KOUSIDI

In the framework of the discussion put forward by the workshop “Design Processes for Transition,” on the revision of the tools, synergies and agencies of the architect under the pressing sustainability demands, we are prompted to reflect on the future potential of design with and for the climate: on the effects it can generate, the changes it can allow for, the degrees of engagement it can influence in the context of the contemporary city.

Architectural design is for the greater part linked with issues related to the physical/permanent aspects of building; however, in the light of the growing environmental challenges, architecture’s non-physical/transient traits come significantly to the fore and acquire equal importance. Three written works published at the turn of the 1960s—Sibyl Moholy-Nagy’s *Native Genius in Anonymous Architecture* (1957), Bernard Rudofsky’s *Architecture without Architects* (1964) and Victor Olgyay’s *Design with Climate* (1963)—are explicative of this shift of paradigm, as they cast a novel gaze at bioclimatic reasoning in architecture. Looking at pre-industrialized building cultures, with the aim to reveal their functional and aesthetic value, they provide different yet intersecting readings of architectural form based on the consideration of the regional climate. Awareness of the interrelation between architecture and the environment was perhaps the most important lesson that these research works delivered, for through their “focus on climatic, formal, and material responses to varying spatial and temporal environments,” they pointed to “an architectural habit of mind—a pedagogy—for energy, heat, and human comfort” (Moe 2014, 198).

This pedagogy rings all the more essential today, when reasoning about design processes in transition through the specificities of the physical context—the climate, the topography, the weather—is of fundamental significance and resonates with the search of a more efficient stance to architecture. In this backdrop, intermediate spaces—spaces which mark the transition between inside and outside, between the building and the street, the house and its margins—acquire a central role by means of their ability to register and mediate the effects of climate change. They can be interpreted as witnesses of perpetually changing environmental phenomena, advocates for new approaches toward ecological transition. Liminal, interstitial, marginal spaces—filters, skins and thresholds, spaces of passage, porches and terraces—offer a place “where architecture’s edges encounter climate, where hosts meet guests, and where we all might acclimate” (Hailey 2021, 89): spaces at risk, paradoxical and contradictory, fragile and essential, they “celebrate the in between, as they teach us the value of thresholds” (Ibid., 105).

On the architectural scale, the building envelope, on which multiple aspects of design thinking converge, articulates a re-evaluation of sustainable design practices. An intrinsically liminal architectural element, it has been consistently connected with issues of climate, thermal comfort and environmental efficiency. As Daniel Barber has demonstrated, the emergence of “climatic modernism [...] encouraged inhabitants to interact differently with their façades and the spaces those façades helped produce, thereby activating a new relationship between inside and outside, and hence between societies and environments” (Barber 2020, 16). It induced the production of “new subjects—new individuals with novel desires, newly sensitive to the thermal conditions of the interior” (Ibid.) and elicited a shift of attention from the visual representation of buildings to the environmental qualities of indoor spaces. As a consequence, a consistent attention on the social function of architecture came to surface, along with the understanding of the built artifact through the lens of a “*physical* aesthetic” (Breuer 1956, 64) to which issues of comfort, health and human well-being are central. Drawing upon these precedents, it seems crucial today to approach the building envelope as “a primary means of understanding the ecological and the built environments,” as a medium “to locate ourselves within the web of relations of which we are a part” (Lee and Holzeu 2011, 128). To address the issue of sustainability, at the various scales involved in the city, “what matters is our relationship to natural organisms and environments, not the usefulness, performance or affectations” of the mechanical instruments deployed to regulate our living environments (Ibid.).

On the urban scale, intermediate zones in the city, green spaces, urban gardens and parks, therefore serve today as fields of design experimentation targeted at an ecological transition. They are regarded as “testing grounds for urban environments based on changing thermal conditions, [providing] a model for how to condition indoor environments in the future” (Roesler 2019). Climate-, energy-, nature-based practices that center on these zones call attention to a design approach which develops from the outside in and promotes “a *reflection* of the thermal requirements of the contemporary city and a *play* on the artificiality of urban microclimates” (Ibid.). Balancing between evidence and abstraction, evaluation and speculation, these practices highlight that “the simple bodily experience of thermal conditions” is about control, regulation and efficiency, but it is also “a metaphor for the more abstract meanings represented by a place: the comfort, the delight, the social affinity, each reinforcing the overall significance of the place in people’s lives” (Heschong 1979, 65).

In recent years, the in between, in its metaphoric and literal meanings, continues to gain ground; it becomes part of a growing phenomenon that explores the agency of nature in architecture and urbanism and sees the boundaries between inside and outside, natural and man-made qualities to be folding in. Such a phenomenon centers around practices that recognize “articulations between the city and the biosphere as positive capabilities,” pointing to the emergence of a *third* space, “an intermediate zone (that is neither fully of the biosphere nor fully urban),” in which different disciplines, among them architecture, biology and material technology, may operate (Sassen 2016, 173). The exploration of possible interfaces between the organic and the inorganic entails design processes which operate at the physical, as well as at the disciplinary, margins of architecture. Yet, to approach design with/for the climate solely through a technological perspective would mean to overlook an important aspect of the discipline: its potential and its responsibility to foster new ideas regarding the entangled relation between material and form, aesthetic and social concerns.

As the mediatory relationship of building to the natural world continues to be a consistent concern for contemporary architects, artists and theorists alike, the problem of architectural form will continue to call for further exploration, as “it cannot be deemed simply subservient to, or the passive recipient of, the claims of an ethical horizon as it is delimited by current environmental modalities” (Cohen and Naginski 2014, 3). In considering design processes in a state of transition, as the workshop outputs proposed, it is important to adopt a multiscalar, multidisciplinary, multi-temporal approach to the architectural project. It is important to adopt a stance towards the design project which involves continuities, but also rupture, change and transgression. “Project making,” David Leatherbarrow reminds us, “requires movement away from its own techniques toward conditions that are not of its own making, an eccentric procedure dedicated to the unseen potential of the world it seeks to remake” (Leatherbarrow 2012, 12). It goes from here that it is pivotal to expand on the existing discourses on architecture and the environment, on the reasoning about the design project with and for the climate, through the technologies it adopts, the spaces it creates, and the new patterns of living it enables for.

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**ON APPARATUSES,
AGENCIES, AND
AFFORDANCES:
BREAKING DOWN THE
DESIGN LEXICON FOR
TRANSITION**

JACOPO LEVERATTO

Like any other lexical toolbox, also the one proposed in this text is intrinsically partial, as it could be easily expanded in many different directions. But this is not a flaw, it is just how this usually works. Words over words may in fact be added on the basis of their usefulness in interpreting a certain class of phenomena (Foucault and Deleuze 1972), and the operation would be equally partial and potentially infinite according to the perspective assumed in this regard. The entries of a lexicon, however, are rarely more relevant than its entirety in expressing a certain cultural position, and the ones presented here are no exception. In their singularity, they offer possible design strategies to tackle current and future environmental transitions, but it is the whole list, in its sequence and its logic of composition, that perfectly outlines a theoretical framework in which these answers can be elaborated. A framework that, during the last fifteen years, has moreover undergone a remarkable transition in terms of cultural approach, with respect to the role of architectural design in governing urban transformations.

As in fact noted by Pierre Chabard in 2018, in an article published in *Log*, the economic crisis of 2008 radically changed the perspectives of and on architecture. Not only from the productive point of view—however marked by considerable upheavals—but mainly from the theoretical one and in particular with respect to its very role. That of a profession, a field of study, and a cultural debate confronted, on the one hand, with the evidence of their subordination towards the society of capital and consumption. And, on the other hand, with the awareness of their instrumentality—if not with the suspicion of their connivance—in promoting a collapsing system (Spencer 2016). A fact that, after years of explicit post-critical trend (Latour 2004), has unexpectedly opened a season of re-evaluation of the role of architectural and urban design in this regard, characterized by the recovery of the speculative dimension of architecture and its ability to offer a sort of critical theory of society (Colomina e Wigley 2016, 162-163).

Not that this represents something entirely new, in reality, as any architectural project, in certain sense, can be seen as a sort of critical theory, albeit local. Like a critical theory, a project in fact suggests and prefigures a concrete and feasible alternative to the existing reality (Marcuse 2005, 71-75), it is its constitutional invariant. What varies, on the contrary, is its instrumentality, or the objective for which it is aimed. For this reason, if a project is meant to be also a critical tool, it is not enough for it to indicate the direction of a change, but it is also necessary for this direction to emerge as a response to the internal contradictions of society, not from their acceptance. And today, architectural design is increasingly called to question an order of things that is increasingly given as natural, recognizing, in the first place, to what extent it represents an “apparatus” of that order and its possible subversion. By trying to understand, in other words, the meaning of that

set of “discourses, institutions, architectural forms, regulatory decisions, [...] and philosophical [...] propositions” that the project mobilizes in this regard (Foucault 1980, 194-196).

From this point of view, it can be said that a great part of the history of design over the last seventy years has been marked by the clear attempt of overcoming functionalism and a certain idea of social engineering. And this has happened through a cultural position aimed at incrementally increasing the affordance of architecture—or its “accommodating potential” (Hertzberger 1991, 150)—to different and heterogeneous design agencies. Spatial redundancy, flexibility, polyvalence, genericity, vagueness, and disjunction, for instance, have all been tentative strategies implemented to enable different forms of personal interpretation, as the passage from the idea of a “passive user” to the “active” and the “creative” one has been incrementally taken for granted (Hill 2003). And in the last decade, this recognition of the inhabitants’ design agency also in urban spaces has challenged the role of architects, planners, and other practitioners, by requiring a new approach that could effectively mix top-down and bottom-up impulses and manage heterogeneous, multi-disciplinary and multi-scale contributions (Gotti, Leveratto and Colombo 2022).

Today, however, as perfectly testified by the lexicon proposed here, there is even more than that. Something that locates the theoretical framework of architectural and urban design in a truly Latourian dimension. Because not only the selected words depict the agency of designers, in governing complex transformations, as dependent upon associations with others’, rather than independent and located within the self. But they also describe, in their succession, these associations—or more precisely “networks”—as composed of a multiplicity of interacting human and non-human actors, equally important in determining certain courses of action (Latour 1997). As though these transformations could be increasingly interpreted as complex processes, sometimes even unconscious or unintentional, of multiagent world-making, open to the hybridization of different species and technologies. And as if the research for spatial affordance, by consequence, should be directed not only to different forms of inhabitation but also to the coexistence and collaboration among these diverse actors.

Also in this case, of course, it is no coincidence. In the same period, in fact, in which nature has progressively shown itself to be increasingly anthropized, the cultural framework of human sciences has moved towards a theoretical position that, today, entails a substantial overcoming of its own category of reference (Haraway 2016). An idea that, in comparison with the last decades of the twentieth century, does not imply radical claims of self-extinction—nor the construction of a transhumanist imaginary—but requires a reconsideration of human agency within new limits. And precisely, the limits

defined by a fundamentally biocentric perspective according to which the whole living environment has to be considered as having its right to flourish regardless of its instrumentality for human purposes, and for which design is more and more called to think the world in terms of connections rather than divisions (Leveratto 2021).

Obviously, from this point of view, one may legitimately question whether architectural and urban design can produce working solutions for this complex multiplicity. But this question would be essentially misleading since, as Isabelle Stengers wrote in 2015, the present historical moment is characterized by the impossibility of finding solutions for what she named the “intrusion of Gaia” (20). Because the search for solutions, in her view, would only nurture a myth, that of progress, that has already been debunked. Instead of solutions, by contrast, she proposes to imagine a new form of “objectors” to escape the logic of growth and the consequential exploitation of labour and nature. All this, by means of political experimentations that, from her point of view, must not happen through direct production, but through the “production of repercussions.” Or better, through building “resonance chambers” that support the struggle to break free from the dominant narratives, by letting those experiments be shared and build consensus upon already practicable different ways of living (Stengers 2015, 152-153).

This, in other words, is the most relevant thing that architectural design, if meant as a critical tool, can do when dealing with the emergence of this heterogeneous condition. Because, historically, architecture’s task has been not only that of making spaces but mainly giving them a meaning through a shape that could be conceptualized. And good design, besides making things work, has always had the ability to turn these things, however new or unconventional, into parts of a formal discourse that could enter and have a weight in the ongoing cultural and political debate. This is why, even in this moment, within the limits of a post-representational regime, looking at architecture and its symbolic system is still crucial. Because architecture can be capable of proposing visions of alternative futures, radical yet transmissible. As architects, but also landscape, and urban designers can offer not only sets of instructions to live differently, but also interpretations, and expectations on how to be in the world differently, both functionally and symbolically. And in so doing they can challenge the current model of development in ways that could be increasingly culturally perceived (Leveratto 2021, 217-218).

What, in summary, this lexicon offers, after careful analysis, is a series of opportunities, not solutions. Possible strategies for setting—rather than for solving—the different problems emerging from current environmental and urban transitions. And in so doing, as a whole, it indirectly outlines

the theoretical framework in which designers can coherently operate in this regard. One in which design, as a product and a process, is meant as a complex and multifaceted apparatus of empowerment, mobilized to increase the affordance of architectural and urban spaces to different forms of inhabiting agencies, belonging, however, to human and non-human actors, organized as communities. For this reason, in most of the strategies, whereas design emerges from certain practices and relationships, it often develops to make space for new and unpredicted ones. Within a field that, obviously, remains that of the project, but a project meant as a proposal rather than predetermination. And through an operational attitude towards the built environment which, thanks to its topological nature, is not limited to a single type, but can bridge landscapes of very different nature.

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Design Processes for Transition

claims for a critical perspective on the profound transformation of urban spaces and tissues under the pressure of the contemporary environmental crisis. The book is an experimental output of the joint research activity between the PhD Program *Architectural, Urban and Interior Design* (AUID) and the research program *Territorial Fragilities* (TF) at Politecnico di Milano.

Starting from the reconsideration of the current, and sometimes abused lexicon of design approaches vis-a-vis the inducted transitions, it develops as a collection of textual and visual micro-narratives, building a questioning platform between experts, designer, young and experienced researchers in the design fields.

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