
Middle-Out

Architecture:

**process- and user-oriented
approaches to urban
architectural design**

Middle-Out Architecture: process- and user-oriented approaches to urban architectural design

Romain Claus

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Under the direction of:

Prof. Jeffrey Huang, supervisor

Prof. Maryline Andersen, observer

Christina Doumptioti, doctoral assistant

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FOREWORD:

ARCHITECTURE AS A PROCESS

“I assume that in every domain, the process is important and a final result which can be determined with absolute certainty does not exist.”¹

— Yona Friedman

“I think the traces of use and patina and the traces of weather and all that enrich the building: they bring in the narrative of life and time.”²

— Juhani Pallasmaa

“Visual representation of the building, rather than its actual presence in the field, has come to define what architecture is – and what it is not.”³

— Nicolaas John Habraken

PROCESS

The theme of this essay was first and foremost born out of my firm belief in ‘Architecture as a process’ in lieu of a finished product, as architect and theorist Yona Friedman ably summarised, describing his ‘Architecture Mobile’ manifesto: “The process is important and a final result which can be determined with absolute certainty does not exist.”⁴ As answered by Friedman in a recent interview when asked about this specific quote, this vision is not necessarily limited to the life of a building after its construction, but pertains to a continuation of the trial-and-error design process into the building’s use by its inhabitants.⁵

Considerations of change over time implies taking into ac-

1. Yona Friedman, *Pro Domo* (Barcelona: Actar, 2006): p. 15.
2. Michael Asgaard Andersen, “In Conversation: Peter Zumthor and Juhani Pallasmaa,” *Architectural Design* vol. 82 no. 6 (November 2012): p. 22–25 (23).
3. Nicolaas John Habraken, *Palladio’s Children : Essays on Everyday Environment and the Architect* (New York: Taylor & Francis, 2007): p. 8.
4. Friedman, *Pro Domo*, op. cit.: p. 15.
5. Vladimir Belogolovsky, “Interview with Yona Friedman: Imagine, Having Improvised Volumes ‘Floating’ In Space, Like Balloons,” ArchDaily, February 24, 2020, www.archdaily.com/781065/interview-with-yona-friedman-imagine-having-improvised-volumes-floating-in-space-like-balloons. Accessed November 29, 2020.

count not only the physical ageing of a building, but also the forces at work behind this: the very use of architecture by its inhabitants, that is, the act of ‘dwelling’. Therefore, integrating time implies integrating residents. This vision of architecture as a process, and, overall, a discipline integrating dimensions of space, time and actors, comes as an overarching theme throughout this essay.

SUSTAINABILITY

In 1987, the so-called Brundtland Report, produced by the World Commission on Environment and Development, prompted the inception of the now ubiquitous concept of sustainable development, and provided the following definition: “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁶ Later in 1992, the Rio Declaration developed in the context of the Conference on Environment and Development elaborated on the principles of sustainable development in the form of a non-binding agreement between the signatory states. Interestingly, the declaration states that “environmental issues are best handled with the participation of all concerned citizens, at the relevant level.”⁷

Thereby, it appears sustainable development was, from its inception, intrinsically linked to participative processes and considerations of time. One may wonder how such emphasis would provide grounds for a more sustainable architecture.

UNCERTAINTY

Friedman’s perspective on the fundamental importance of ‘process’ spells out another recurring aspect: the consideration of uncertainty. With “the narrative of life and time”⁸ introduced into the architectural discourse, more than just introducing vagueness or doubt in the architectural process, uncertainty challenges the role of the architect as a key planner. Embracing uncertainty as a vital component of architecture hints towards a focus shift, as efforts to eliminate it are diverted towards not only mitigating it, but also fostering it.

Paradoxically, it seems as if forward-looking modernist ideals of progress are in total contradiction with a built environment in stasis they helped to produce. Against the backdrop of an ever-increasing

6. *Our Common Future: Report of the World Commission on Environment and Development* (United Nations, 1987): p. 15.

7. *Report of the United Nations Conference on Environment and Development* (United Nations, 1992): p. 2.

8. Andersen, “In Conversation: Peter Zumthor and Juhani Pallasmaa,” op. cit.: p. 23.

pace of change, so characteristic of our times, unforeseen conditions should be a driving force in architecture instead of a deprecating one. One might wonder what tomorrow's architecture will become, and perhaps more importantly, what the architects of tomorrow will be.

MATERIALISM

Such views on architecture as a process seem at first glance diametrically opposed to a vision of 'Architecture as a finished product' from a materialistic perspective. However, it appears as if the dematerialisation processes we now face only validate a long-going emphasis put on visual representation — that can be traced back to the shift from 'Master-builder' to that of 'Architect' during the Renaissance — that crystallise architecture as a foretold 'object'. Architecture is now being published even before being constructed and as architect, educator and theorist Nicolaas John Habraken puts it: "the number of signature buildings and places we know intimately through published or projected images far exceeds the number we have experienced in real space."⁹

Interestingly, in this contemporary context, 'Architecture as a process' seems more oriented towards a certain materialism, although not that of 'Icons' and 'Bigness', and certainly calls for a re-consideration of our representation habits.

9. Habraken, *Palladio's Children : Essays on Everyday Environment and the Architect*, op. cit.: p. 8.

INTRODUCTION:

MIDDLE-OUT ARCHITECTURE

While 'Architecture as a process' is an approach that may be declined into a wealth of differing stances, the aim of this document is, more precisely, to explore perspectives that fall in the spectrum of what could be called 'Middle-out Architecture'. In so doing, it is first and foremost important to establish a clear definition of the term.

TOP-DOWN AND BOTTOM-UP

The primary sense of the word 'middle-out', against the backdrop of problem-solving fields at large, implies a partial contrast with both antithetical notions of 'top-down' and 'bottom-up'. Thus, it appears easier to initially attempt to understand middle-out architecture by providing a negative definition. What is it not? What are top-down and bottom-up approaches to architecture?

On the one hand, top-down design is characterised by concerns regarding the nature of a finished product, or end solution. The bigger picture is the starting point, which then requires implementation, that is, fine-tuning under specific contextual circumstances. In a world in which architecture is neither designed nor built by its potential users, top-down design is translated into an architecture that primarily expresses the will of its instigator, which, in turn, might reflect the need of the users as a more or less singular abstracted entity.

On the other hand, bottom-up design is exemplified by a careful consideration of the multiple factors and issues, leading to emerging solutions. Instead of decomposing an objective, a solution is composed. The emergent nature of bottom-up design reflects the principle of uncertainty spelled-out by Friedman in the context of his 'Mobile Architecture' manifesto. In architecture, bottom-up design translates into a production of the built environment directly by its inhabitants, without the help of the architect. Vernacular architecture was the norm in the past, but today, informal settlements account for most of bottom-up architecture production. Due to the inherent absence of architects, this type of production might — depending on who you ask — not even be considered architecture.

MIDDLE-OUT

While Friedman's 'Mobile Architecture', and the later 'Ville Spatiale' expanding on its principles, might be assimilated as bottom-up approaches at first glance, they also possess qualities inherent to top-down architecture. Indeed, in both projects, the large-scale load-bearing megastructures, while reduced to a minimum, require a prior top-down conception by the architect and act as a 'substrate' inside which an emerging architecture may take shape.

We may thus provide a positive definition of middle-out architecture: top-down designs that only withstand, but fosters bottom-up alterations and retrofitting. In other words, this approach intends to work out a middle ground, a compromise between the hand of the architect and the dweller's need of and right to self-determination. For this purpose, intrinsic qualities of both bottom-up and top-down architecture are not seen as antithetical, but complementary.

URBAN CONTEXT

While world population is expected to rise above the 8 billion mark by the year 2024, by the United Nations most conservative estimates,¹⁰ an even more significant milestone has been reached somewhere between 2006 and 2007: more than half of the world population is now considered living in an urban environment.¹¹ Looking ahead, the UN has projected that from 2018 to 2050 2.5 billion more people will inhabit cities,¹² and as they stated: "the future of the world's population is urban."¹³

This urban growth translates into two opposite but sometimes complementary types of expansions: inwards, by densification of the urban fabric, and outwards, by urban sprawling. The latter has generally found its place in the most individualist societies, where the individual housing model is favored, resulting in contemporary issues of increase in reliance on personal transportation and related consumption of fossil fuels. Indeed, a correlation between density and petroleum consumption has now been evidenced, with Asian metropolises predominantly leading the way following a high density and low

10. United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects 2019, Volume I: Comprehensive Tables* (New York: United Nations, 2019).
11. United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects: The 2018 Revision* (New York: United Nations, 2019).
12. United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects 2018: Highlights* (United Nations, 2019): p. 1.
13. *Ibidem*: p. 3.

petroleum consumption model.¹⁴ Consequently, the model of urban density is more than ever supported by environmental advocates.

Moreover, dense urban contexts appear to be the breeding grounds of extreme architectures. On the one hand density justifies the most severely top-down approaches to architecture; on the other the extreme gravity force exerted by dense population centres gives rise to bottom-up informal settlements. Thus, this study will focus on architectures that not only embrace notions of urbanity, but also those of density and efficiency through proximity.

GOAL

The goal of this text is to explore how can each approach — ‘top-down’ and ‘bottom-up’ — answer the shortcomings of the other, and how can middle-out architecture, as previously defined, challenge both the role of the architect as well as that of the inhabitant, in such a way that would provide additional value to architecture in urban settings.

Without claiming to provide an exhaustive account of middle-out architecture, this essay aims to offer an overview, in broad strokes, of contrasted opportunities and sources of such additional value in middle-out architecture. In so doing, the focus gradually shifts from matters of design and construction to questions of practice. Furthermore, it intends to spell out the intricacy and interrelatedness of the different issues it lays out, pointing towards the need of bridging the different answers by organising them in such a way as to form a narrative rather than a strictly horizontal comparison. In that sense, ‘Middle-out Architecture’ acts as an umbrella term.

STRUCTURE

In the first chapter, we will explore efforts to formally and structurally differentiate collective from individual elements of architecture, constructed as a response to post-war era housing developments, urban vertical densification, and their uniform and monolithic nature as a symptom. This chapter is mainly centered around Habraken’s theory of Supports. This chapter will be concluded by a case-study of NEXT 21, an experimental housing development in Osaka, implementing Habraken’s theory and subscribing to the model of ‘Open Building’.

14. The Urban Task Force, *Towards an Urban Renaissance* (London: Routledge, 2003).

In a second chapter, we will examine architects' attempts to cede a portion of their design and construction authorship to the inhabitants, answering to an increasing polarisation between formal and informal urban developments, mainly in the Global South metropolises. This chapter will end with a case-study of Quinta Monroy, a partially self-built and incremental neighborhood developed in Iquique, Chile, by Aravena's firm Elemental.

In a third and final chapter, focus will be placed on how, in response to gradual loss of architect's agency in the last decades, a priori rendering obsolete the previous approach, new forms of practice challenging the role of the architect might provide an answer. This chapter will be concluded by a case-study of the work of Assemble, a London-based practice pushing the contemporary boundaries of the architect's role, reclaiming agency while fostering user participation.

Each chapter adheres to a rather similar structure, beginning with an introduction to the ramifications of the issues at hand followed up by an analysis of the spectrum of various middle-out solutions and the answers and critics may have provoked. Thereafter, each analysis is completed with a more thoroughly reviewed case-study completed with an overall preliminary conclusion to the chapter, paving the way to the next one.

CHAPTER I:

NESTED ARCHITECTURE

“By accepting the involvement and initiative of the user as a starting point for contemporary housing, we may begin to see a way out of the constraints in which we operate. Un-suspected possibilities emerge. Both the technological and the human sides of the housing problem can acquire new perspectives.”¹⁵

— Nicolaas John Habraken

In response to an increase in scale, density and therefore complexity of architecture, leading to a general disinvolvement of residents in the design process, would more compartmentalized approaches — in the form of ‘Nested Architecture’ — help the user find his place in the process? What additional benefits would these approaches bring?

FROM DWELLING TO HOUSING

In not-so-ancient times, ‘dwelling’ was the standard: the everyday built environment, whether urban or rural, was mostly shaped by its inhabitants. Today, this task has been outsourced, large residential accommodations are designed and built by external actors, mainly the architect in terms of design. ‘Housing’ is now the ubiquitous norm in urban settings. While the act of dwelling implies the fulfillment of one’s own needs, ‘housing’ suggests carrying out a task contributing to society. This shift towards housing was further cemented by the model of mass housing, primarily during the post-war reconstruction of Europe.

INTERDEPENDENCE

Habraken credits the densification of the city through the stacking of dwellings as the leading cause behind the advent of mass housing and user disinvolvement: *going from freestanding dwellings to multiple housing units all dependent on the same load-bearing structure*.¹⁶ Indeed, the new urban condition of density involves aggregation, proximity and vertical development, leading to growth

15. Nicolaas John Habraken, *Supports: An Alternative to Mass Housing* (London: Architectural Press, 1972): p. 3.

16. *Ibidem*: p. 6.

in scale and complexity of the urban fabric. At the time, this growth would appear unachievable without a matching scaling of the undertaking of architecture, resulting in a serial production of a monotonous architecture.

By reaction, in places where individualisation is most taken to heart, this issue has raised numerous responses from both architects and non-architects, hinting towards growing interests in interrogation of vertical and monolithic urban developments, in the shape of nested architecture. In this essay, nested architecture is understood as an architectural composition of multiple elements built or inserted into a larger scale architectural object, benefitting from a certain degree of conceptual autonomy by virtue of their constructive independence.

AGEING MONOLITHS

The complex interdependence resulting from a new scale of mass housing, has had as first consequence the user's withdrawal from the initial design process. But more important is the inhibition of user involvement preventing the building from ageing organically — due to its monolithic nature — as Habraken pointed out:

“People require more time to grow into a community than it takes mass housing to wear out. A district with character will therefore in mass housing always be a slum. We have become so used to this that character and personality in a district are almost instinctively associated in our mind with a certain degree of decay, with the melancholy of age.”¹⁷

Due to this failure to integrate the user in the process, both before and after construction, “all the unforeseen happenings which in time will be added to the building will be negations of the original version,”¹⁸ denoting a vision of static architecture. Thus, the issue raised is not about producing adapted housing, but non-static adaptable housing:

“The question we have to ask is how such an enormous object is to maintain itself in time. How will it renew itself? How will it behave to prevent decay? How shall new inventions and changing opinions be incorporated? The test of the ability of a town to cope with time lies in its ability to adapt to change, to assimilate the new, to alter part by part, and yet to

17. Ibidem: p. 39.

18. Ibidem: p. 33.

maintain its identity, and to ensure its existence and that of its inhabitants without too severe shocks.”¹⁹

Oftentimes, nested architectures and other attempts to fragment this monolithic architecture have been developed — and rarely built — as theoretical answers to the challenges of a serial and monotonous architecture.

1909 THEOREM

At the turn of the 20th century, an era that witnessed the birth of the American skyscraper, an influential drawing foreshadowing these new questionings was published in LIFE Magazine. (fig. 1.01) Drawn by A.B. Walker, it was also then accompanied by a caption that read:

“Buy a cozy cottage in our steel constructed choice lots, less than a mile above Broadway. Only ten minutes by elevator. All the comforts of the country with none of its disadvantages.”

The caption certainly attests to the growing interest in combining advantages of both urban top-down and rural bottom-up approaches, or in other words, the “steel constructed” structure and the “cozy cottage.” Without considering its caption, it was then retitled ‘1909 Theorem’ when it was later famously reinterpreted by Rem Koolhaas in his *Delirious New York* retroactive manifesto. Emphasising on the uncertainty brought about by the nested device, he reads into it that:

“From now on each metropolitan lot accommodates — in theory at least — an unforeseeable and unstable combination of simultaneous activities, which makes architecture less an act of foresight than before and planning an act of only limited prediction.”²⁰

One might wonder if this ‘1909 Theorem’ simply indicates cultural differences during a period of rural flight, or signals a deeper questioning of the ramifications of a paradigm shift as Koolhaas seems to point to.

19. Ibidem: p. 35.

20. Rem Koolhaas, *Delirious New York: A Retroactive Manifesto for Manhattan* (New York: Monacelli Press, 1994): p. 85.

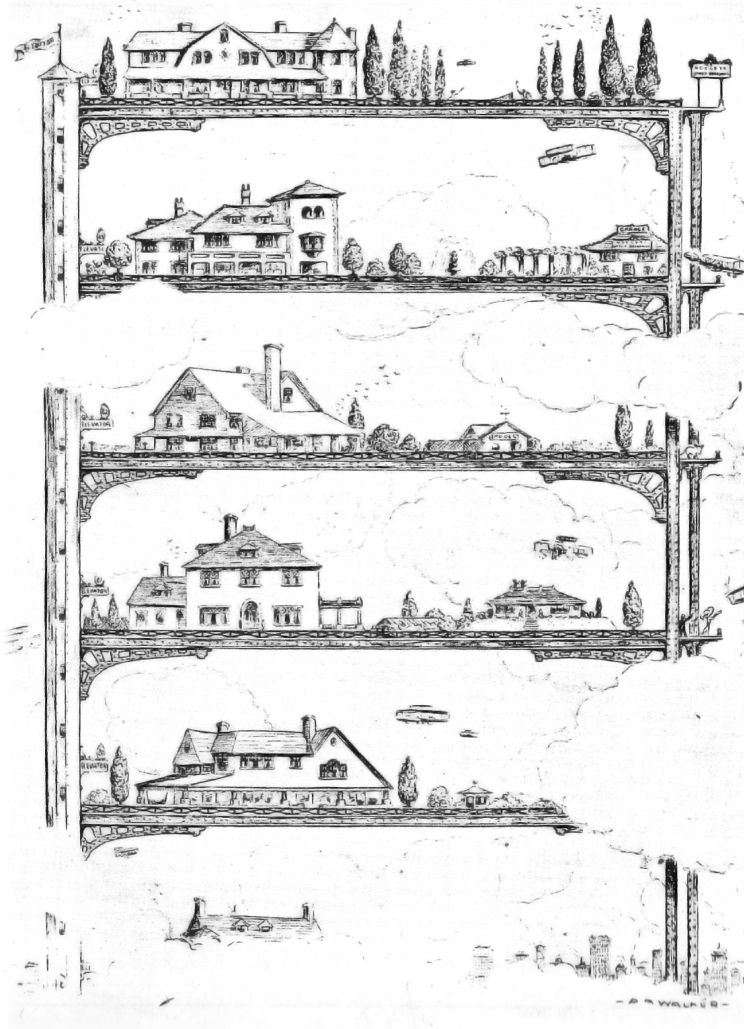
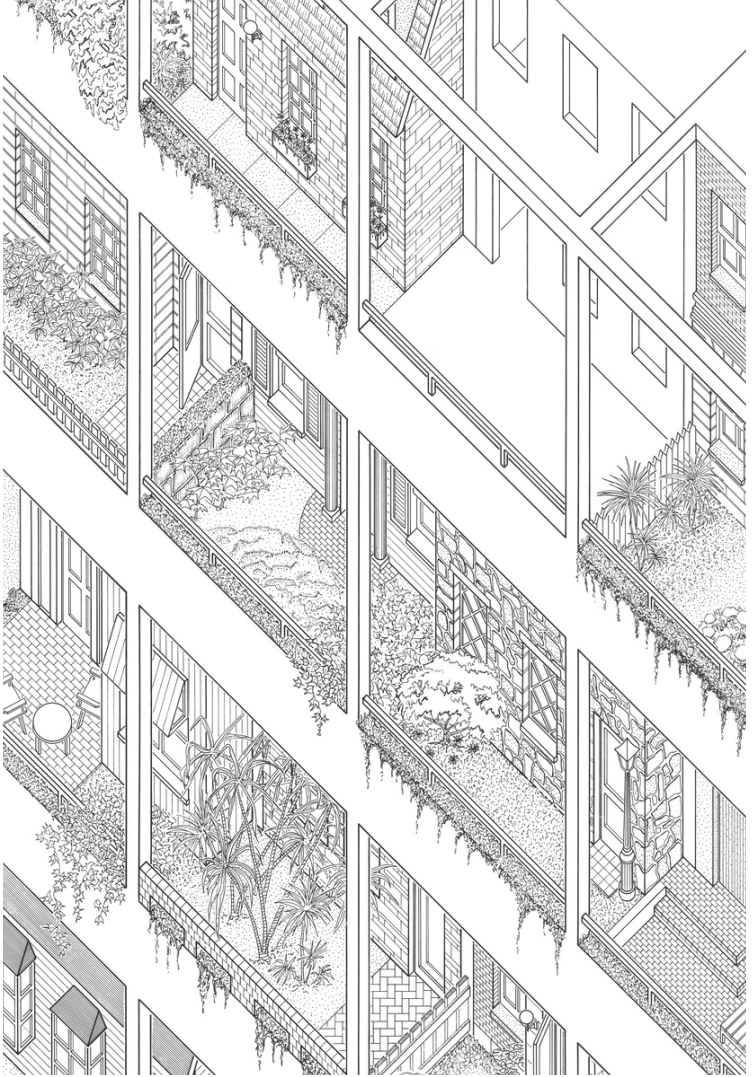


FIG. 1.01

1909 Theorem, A. B. Walker



Highrise of Homes, James Wines, SITE

FIG. 1.02

HIGHRISE OF HOMES

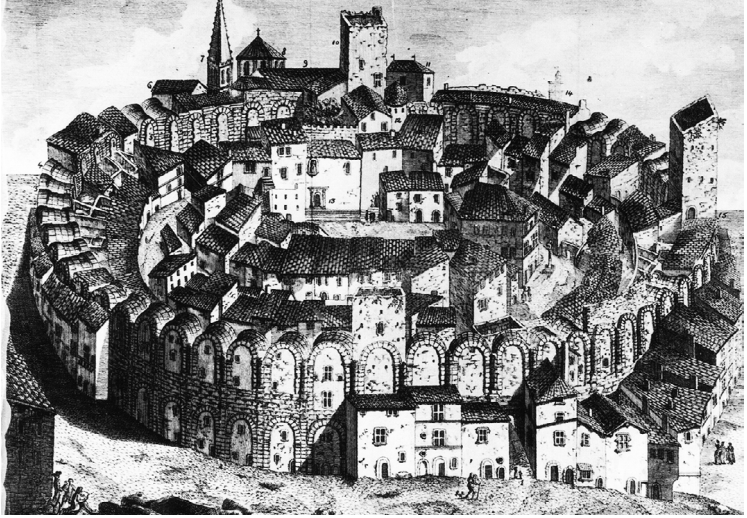
Highrise of Homes, another theoretical exploration by SITE²¹ published in 1981, also imports the individual housing model into an urban context by placing it into a larger scale structure used to vertically multiply the ground footprint of the building. (fig. 1.02) Similarly to the 1909 Theorem, it forms a sort of ‘architectural cadavre exquis’ or village-like highrise. However, in step with its time, the imported model is here more of suburban than rural nature. Indeed, the theoretical aim of the project was described as to “accommodate people’s conflicting desires to enjoy the cultural advantages of an urban center, without sacrificing the private home identity and garden space associated with suburbia.”²² Similarly to the ‘1909 Theorem’, one might read into it a deeper reconsideration of residents’ involvement in urban settings.

BUILDING OR INFRASTRUCTURE?

These projects raise not only the question of the relation between individual and collective housing, but also that of the role of the large scale structure: is it part of the city as a building or as an extension of the city infrastructure itself? In other words, is what the housing unit is to the collective dwelling infrastructure what the house is to the public urban infrastructure? Certainly, in most cases, inhabited large-scale structures act as extensions and terminals of the urban infrastructure, for they comprise the final links of many large-scale infrastructure networks: circulation, power grid, water supply, waste management, sewer systems, to name but a few. Additionally, these extensions do not merely act as individual terminals, but as parts of the collective network as well.

One may find historical precedence of such ambiguity in the formerly inhabited amphitheatres of Arles (fig. 1.03) and Nîmes following their transformation into fortifications after the collapse of the Roman Empire,²³ or in the famous aggregation of shops lined along the edges of the Ponte Vecchio (fig. 1.04) in Florence. A more recent example is the project for an urban transformation of the city of Algiers, envisioned in 1930 by Le Corbusier and Pierre Jeanneret in the form of the ‘Plan Obus’,²⁴ where the blurring between mass housing and urban-scale infrastructure is made overtly apparent. (fig. 1.05) Indeed,

21. SITE is an acronym of ‘Sculpture In The Environment’.
22. Bevin Cline, *Envisioning Architecture: Drawings from The Museum of Modern Art*, ed. Matilda McQuaid (New York: The Museum of Modern Art, 2002): p. 220.
23. The fall of the Roman Empire was notably marked by urban flight and collapse of cities, resulting in Roman infrastructures mostly becoming out-of-scale.
24. “Fondation Le Corbusier - Projets - Urbanisme, Projets A,B,C,H,” www.fondation-lecorbusier.fr/corbuweb/. Accessed December 8, 2020.



Roman Amphitheatre, Arles, France

FIG. 1.03



Ponte Vecchio, Florence, Italy

FIG. 1.04

streets and vehicle traffic are embedded into the building, its structure becoming the structure of the city itself. Moreover, dwellings seem to enjoy a certain liberty in their arrangement, in a similar fashion to both the 1909 Theorem and Highrise of Homes.

FROM VERTICAL TO SPATIAL

Even though vertical urban development marked a turning point in housing development and spawned new experimental projects²⁵ such as le Corbusier's 'Plan Obus', the structure of the contemporary city still followed the logic of the plan. Indeed, the ground was multiplied vertically but the 'figure-ground' city's network remained primarily horizontal. For instance, this absence of consideration is made explicit through the issue of congestion: the vertical city, as a merely extruded one, only vertically transposes the urban congestion resulting from an increasing density.

At the turn of the 20th century, the development of new three-dimensional structural schemes began to emerge, primarily inspired by advancements in metal truss structures and aeronautical prototypes.²⁶ In this context, Alexander Graham Bell's tetrahedral box kites (fig. 1.06) and his later outlook tower (1.07) marked a shift from vertical to spatial in the development of structures.²⁷ In essence, compared to the simple vertical development of a building, spatial

25. Ludwig Hillberseimer's 1924 'Vertical City' is another prominent key example of such concern towards the integration of the urban development's vertical component. Indeed, as Hillberseimer attempts to answer issues of urban congestion, circulation begins to detach itself from the ground by creating differentiated layers corresponding to different means of transport.
26. In architectural design structures mainly undergo vertical changes. By contrast, in aeronautical design, the intrinsic aspects of motion and defiance of gravity call for a more three-dimensional approach to structural design.
27. Mick Eekhout, *Architecture in Space Structures: Architectuur in Ruimtelijke Constructies* (Rotterdam: Uitgeverij 010, 1989): p. 12–13.

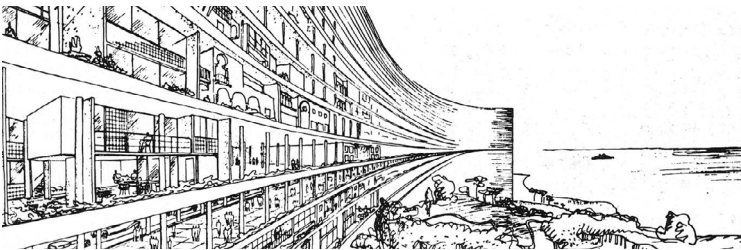
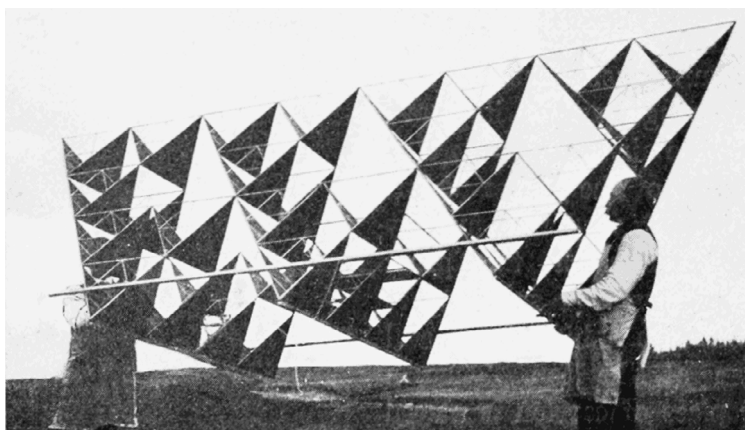


FIG. 1.05

Plan Obus, Le Corbusier & Pierre Jeanneret



Tetrahedral box kite, Alexander Graham Bell

FIG. 1.06



Outlook Tower, Alexander Graham Bell

FIG. 1.07

structures integrate the vertical component in the same way as the horizontal one, forming a quasi-isotropic whole offering similar characteristics and opportunities in both vertical and horizontal directions. By definition, they can only be understood as three dimensional objects, compared to traditional structures easily represented in plan or section.

MEGASTRUCTURES & METABOLISM

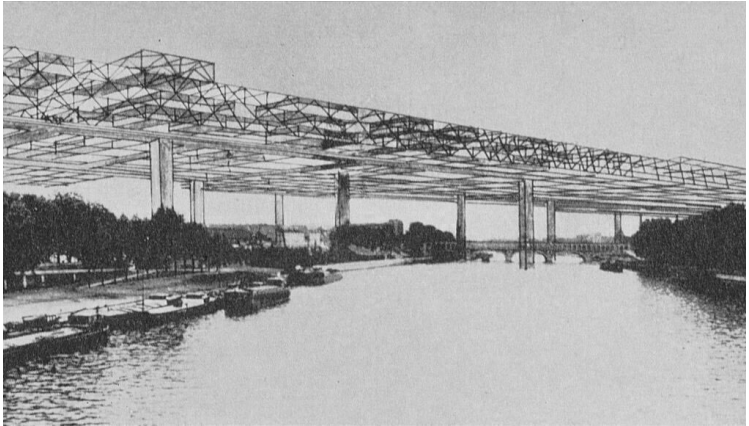
It was not until later during the postwar era, that these structures were reinterpreted on a macro scale, enlarged to the point of making them inhabitable.²⁸ This enabled their potential for complete freedom of three-dimensional use, not only in structural design, but also in urban planning. In fact, it allowed a truly vertical urbanism — compared to ‘figure-ground’ urban planning — that could be better described as three-dimensional.

Indeed, this era also saw the emergence of a new avant-garde exploring the design of these theoretical over-scaled ‘Megastructures’. In this context, the ambiguity between the structure of mass housing and that of the city was unequivocally addressed: they are one and the same. In so doing, the megastructures inherit from the city its existence as a permanent building site, allowing multiple independent architectures to emerge.

Archigram’s ‘Plug-in City’ and Yona Friedman’s ‘Ville Spatiale’ are famous examples of such experimental megastructure projects. In Archigram’s ‘Plug-in City’, the city infrastructure serves as a support structure for ‘plug-ins’, or, in other words, nested architectures consisting of prefabricated modules with diverse functions and lifespans. (fig. 1.08) In Yona Friedman’s ‘Ville Spatiale’, emphasis is placed on not impacting the existing urban fabric. (fig. 1.09) In fact, not only the intrinsic nested architecture of the megastructure discards abrupt demolition and reconstruction as a renewal strategy, but Friedman’s approach of continuous transformation is extended to the existing built environment which acts as an unadulterated backdrop for the project.

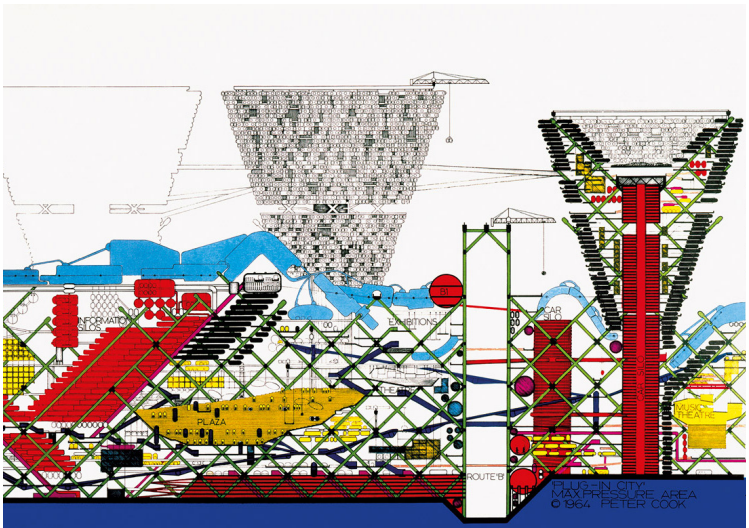
At the same time in Japan, arose the related metabolist architecture that foregrounded the question of growth before that of urban scale structures, drawing inspiration from biological phenomena of growth. While largely theoretical, the approach nevertheless produced notorious built examples, such as Kisho Kurokawa’s Nakagin Capsule

28. Ibidem: p. 94.



Ville Spatiale, Yona Friedman

FIG. 1.08



Plug-in City, Peter Cook & Archigram

FIG. 1.09

Tower, completed in 1972. The design has partially failed to demonstrate the efficiency of the metabolist renewal strategy, as it is today in disrepair. However, it attests to the differential ageing process allowed by its nested nature: the prefabricated capsules display a wide array of states of decay, ranging from totally unusable to carefully preserved units. (fig. 1.10)

THEORY OF SUPPORTS

Written in 1961, subsequently translated in English a decade later in 1972, Habraken's seminal theory of Supports was first developed in a general context of growing dissent towards modernist rationalism, mainly in the shape of Dutch structuralism, itself inherited from Team Ten's dissensions with the rest of the CIAM.

It is no coincidence Habraken developed his Supports theory as a response to conventional modernist solutions to housing shortages and imperatives of the post-war era, the same context that prompted the inception of megastructures and metabolist architecture. This era was indeed marked by drastic and authoritative mass housing developments, responding to the urgency of the situation in regions affected by the war such as Japan and Europe. Large scale developments were indeed not only seen as a device providing an additional value as they were in the case of American skyscrapers, but a necessary means to provide adequate quantities of housing in this period of reconstruction.

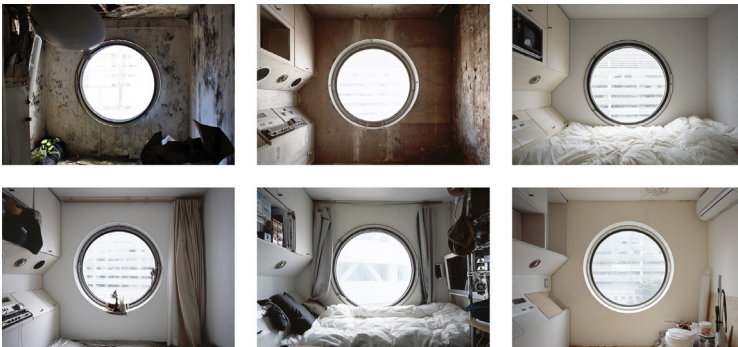


FIG. 1.10

Nakagin Capsule Tower, Kisho Kurokawa

DIFFERENCES & SIMILARITIES

In this theory, Habraken embraces the opportunity to involve the inhabitant and proposes urban-scale infrastructures that would allow dwellings to be independently built, remodeled and demolished without compromising the structure's integrity. Similarly to other parallel theoretical works discussed above, he advocates for "support structures as the framework for a city"²⁹ rather than that for a building alone. In addition, *Supports* exhibited an affinity towards the free composition of serially prefabricated elements,³⁰ reminiscent of many megastructures and metabolist projects. However, in contradiction with these two architectural movements that often integrated ideas of 'nomadism', Habraken's theory was more focused on giving residents means to transform their dwellings, which on the contrary would not disrupt communities by eliminating what he identifies as a 'forced nomadism' component of mass housing.³¹

While providing an example of how his theory could be applied — which incidentally, have much less withstood the test of time than the theory itself — Habraken refused, in contrast to the previous examples above, to provide visual illustrations, underlining his intention not to support a specific architecture but to articulate what he saw as an unavoidable paradigm shift.

Furthering the research around his initial principles, his approach to nested architecture then evolved into one that would account for a vast number of intervention scales, each nested one into another, in an effort to re-establish a "natural relationship"³² where relevant actors are involved at a relevant scale, allowing for user involvement and more coherent practice. (fig. 1.11) In fact, Habraken sees in mass housing an absence of hierarchy of scale, originating in a failure to involve residents. This consideration regarding the role of the architect represents perhaps the most fundamental contrast with other nested architecture theories: the aim is not to simply cede agency to residents, but also to expand the role of the architect by acting at multiple scales.

29. Habraken, *Supports: An Alternative to Mass Housing*, op. cit.: p. 69.

30. Ibidem: p. 47–51.

31. Ibidem; p. 38–39.

32. Ibidem; p. 18.

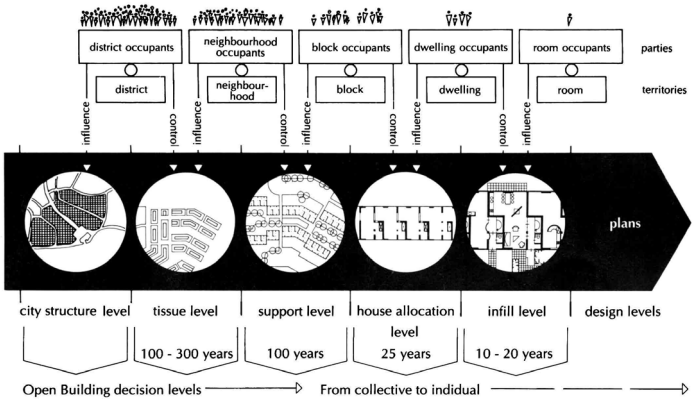


FIG. 1.11 Decision-making scales diagram, Habraken

CONTEMPORARY RELEVANCE

While in his time, Habraken was responding to an architecture which sought to meet the needs of post-war Europe, his theory appears with a renewed relevance in the context of what appears as an ineluctable motion towards an ubiquitous urban condition of density. In fact, Habraken’s theory, far from being rooted in its time, through the Dutch SAR³³ pioneered the work of the still topical Open Building ecosystem, self-described as “an international network of practitioners, researchers and government agencies.”³⁴

Their manifesto states their commitment to seek “a pragmatic extension of infrastructure planning into the design of buildings,”³⁵ working at various scales : ‘Open Building’ may be broken down into ‘Open Cities’, ‘Open Architecture’ and ‘Open Systems’.³⁶

33. SAR is an acronym of ‘Stichting Architecten Research’, translating into ‘Foundation for Architects’ Research’.
 34. “Manifesto,” Open Building, www.openbuilding.co/manifesto. Accessed December 15, 2021.
 35. Ibidem.
 36. Ibidem.



FIG. 1.12

CASE-STUDY I:

NEXT21

Architects: Yositika Utida, Shu-Koh-Sha Architectural and Urban Design Studio

Location: Osaka, Japan

Completion: 1993

OVERVIEW

NEXT21 is a pilot project, built as part of a long-term experiment on sustainable and mixed-use collective housing for the 21st century, at the initiative of the Osaka Gas Corporation. The Osaka Gas Company is one of the major energy suppliers in Japan, operating both domestically and internationally. In addition to testing the implementation of new energy systems, the 6-storey building is an ongoing experiment on ‘loose-fit’ architecture in the vein of Open Building.³⁷

OPEN BUILDING & SUPPORTS

As an application of the Open Building approach, it quite faithfully embodies the principles developed by Habraken, who was consulted during the design phase. Indeed, the whole building is structured by a concrete load-bearing skeleton, setting the rhythm of the spans. In addition, a total of 13 architects participated individually in the design of one or several housing units each,³⁸ consisting in the initial infill and envelope, for a total of 18 dwellings.³⁹ The precedence of the concrete structure is explicitly highlighted by its protruding portions, hinting towards possible subsequent alterations.

In accordance with the principle of “support structures as the framework for a city,”⁴⁰ access to the units is provided by a ‘vertical street’ surrounding a semi-open central courtyard, integrating substantial vegetation fostering urban wildlife, and acting as a highly flexible framework for technical systems. (fig. 1.13)

37. Stephen H. Kendall, “Four Decades of Open Building Implementation: Realising Individual Agency in Architectural Infrastructures Designed to Last,” *Architectural Design* vol. 87 no. 5 (September 2017): p. 54–63 (57–59).
38. Stephen H. Kendall and Jonathan Teicher, *Residential Open Building* (London: Spon Press, 2010): p. 127.
39. *Ibidem*: p. 126.
40. Habraken, *Supports: An Alternative to Mass Housing*, op. cit.: p. 69.

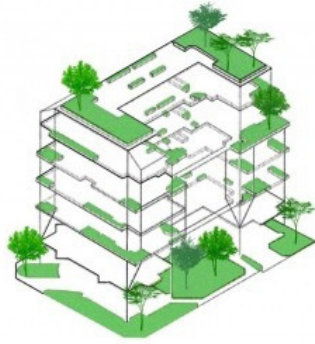
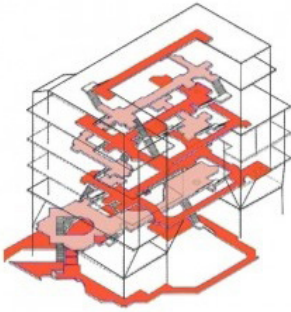


FIG. 1.13

Vertical street and greenery

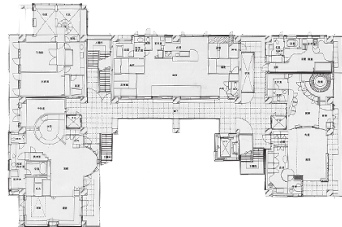
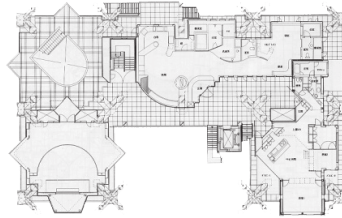
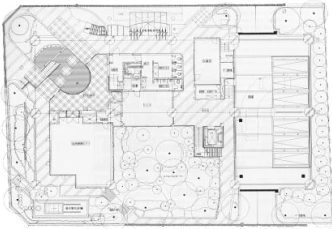


FIG. 1.14

from left to right, top to bottom:
Plans from ground-floor to top-floor

HISTORICAL CONTEXT AND PUBLIC POLICIES

The building has been designed following the principles of the Japanese Modular Coordination System, successor of the Century Housing System. It draws on Japanese architecture's rich history of movable partitions and modular construction, the latter mainly involving the tatami mat as base module, itself based on the traditional shaku unit.⁴¹ As Yositika Utida, NEXT21's leading architect, put it, "in order to construct buildings that long a century, study those that lasted that long."⁴²

Japan has also another more contemporary source of public interest in housing flexibility: an ageing population and rapidly shifting demographics and types of households. However, this demand for flexible accommodations was confronted with a need for a longer-lasting construction. Indeed, a period of rapid and low quality reconstruction during the post-war era produced a number of dwelling which then exceeded the number of households by 1968.⁴³ This fact highlighted the need for higher building standards in the context of the booming economy ensuing the reconstruction. Moreover, the changing demographics paradoxically increased the need for a more stable built environment, as an ageing population would not make it possible for a proportionally reduced workforce to keep demolishing and re-building at the current rates.

All these issues have prompted government involvement in a series of legislative actions concerning both flexibility and longevity in housing, not strictly aimed at involving residents but creating opportunities such as those that led to the construction of this building.⁴⁴

PROVING THE CONCEPT

Furthering the experiment, investigations of the building's capacity-for-change were launched in several phases up until today — in 1994, 2000, 2007 and 2013. Multiple housing units have been substantially remodeled, changing the external envelope, with minimal impact on the other neighboring ones, without facade scaffolding⁴⁵ and reusing of up to 90 percent of existing dismantled elements in some cases. One of the transformations consisted in splitting a

41. Tetsuya Saigo, Seiji Sawada and Yositika Utida, "Future Direction of Sustainable Buildings in Japan," *Open House International* vol. 36 no. 4 (December 2011): p. 5–19 (5).

42. Ibidem: p. 12.

43. Kazunobu Minami, "Japanese Innovation in Adaptable Homes," *Architectural Design* vol. 87 no. 5 (September 2017): p. 38–45 (41).

44. Ibidem: p. 41–42.

45. Kendall, *Residential Open Building*, op. cit.: p. 127.



FIG. 1.15

Vertical street and greenery



FIG. 1.16 (left)



FIG. 1.17 (right)

Ökohaus after construction of the supports

NEXT21 emptied unit

multi-generational unit into two smaller ones, another one in transforming an office-apartment into a young family apartment, and a further one simulating an evolving household over a long period of time, in three steps.

NEX21 & ÖKOHAUS

The clear division between the overall structure architects and infills-envelope architects reminisces of another project involving nested architecture: Frei Otto's Ökohaus. (fig. 1.15) Built as part of the International Building Exhibition held between 1984 and 1987 in Berlin, Otto imagined a complex of three buildings in Tiergarten, following a similar concept. Each two-storey dwelling is freestanding, independent from the other by means of a large and simple post-slab concrete structure. Otto, architect of the structure, restrained himself from influencing the design of individual infills and envelopes, which were nonetheless designed by several architects in collaboration with the inhabitants, resulting in an eclectic facade, a testimony to the dwellers self-determination.

The widely different results betray a more unified approach in the case of NEX21. Indeed, in this case, an architect was responsible for the overall modular coordination, while another designed facade elements for the whole building, creating a more coherent whole but effectively limiting subsequent possibilities for the infills-envelope architects. However, this decision was aimed at easing future transformations and construction materials reuse – in the case of the Ökohaus, the dwellings were not substantially remodeled since its initial construction. Moreover, because the experimentation was focused on retrofits and remodels, NEX21 was – although independently designed by the multiple architects – initially built as a single project, with complete coordination of both the technical systems design and the construction works.

CORPORATE HOUSING

NEX21 represents a form of corporate housing: residents are all employees of the Osaka Gas Corporation. Corporate housing would be commonly associated with a highly top-down environment, due to the hierarchic relationship and the rather temporary nature of the residents who can nevertheless live there for a period of up to five years on average.

Here, the rather temporary stay of the residents is taken as a challenge, an opportunity to demonstrate the possibilities to answer a need for adaptable housing where it is the most exacerbated. Indeed,

the turn-over of successive residents allowed the architects to experiment with more various configurations adapted to a more diverse population. Certainly, the corporate nature of the project also provided a more flexible legal and organisational framework, compared for example with a co-ownership model.

However, while all this allowed architects to experiment more consistently, it is harder to say if these experiments reflected user needs. While NEXT21 demonstrates the feasibility of the Open Building approach on a technical level, the same cannot be said about user participation: is there really an incentive for involvement in a context of temporary corporate housing? We may also wonder if the residents applying for appartements are representative of even the local population of Osaka. Overall, it is consequently difficult to gauge the level of user involvement in the transformation process. Furthermore, no user participation was involved in the initial design of either structure nor apartment typologies: each architect was given a specific potential situation rather than interacting with a future resident.

AN ISOLATED EXPERIMENT

Unfortunately, the experimental nature of the projects also makes it an outlier, an isolated case of rather small scale — compared to its urban context — which prevents certain mechanisms projected in Habraken's *Supports*, and may inhibit other implemented aspects.

For instance, the 'vertical street', disconnected from the rest of the urban fabric except at ground level, is more the translation of a blind alley rather than a conventional street. Three-dimensional urbanism requires large scale applications, but in this case, the experiment really ends at the edges of the building.

CHAPTER I:

CONCLUSION

Overall, we may thus conclude that the issue of the interdependence of multiple dwellings by means of a single load-bearing structure is not inherently linked to a dense vertical urban development. Despite theoretical explorations outnumbering built projects, nested architecture appears to have provided coherent solutions to this issue. Additionally, we can now understand that the primary goal of these nested architectures is not the provision of merely adapted dwellings, but the production of a framework containing adaptable dwellings, capable of consciously withstanding time. However, while nested architecture appears as a coherent approach to producing non-static architecture, the unfortunately limited number of instances of actually built projects makes it difficult to properly assess their capacity-for-change and ability to 'age well'. For the same reason, it is also difficult to understand the degree of user participation this approach would entail. Moreover, the often heavy dependence on building technology and innovation might inhibit the ability of nested architectures to integrate user participation. This fact calls more 'low-tech' solutions, which may also entail participation in both design and construction processes.

In conclusion, most of the added-value found in nested architectures can be summarized in six key points:

- an increased mobility of residents,
- more adapted accommodations,
- more resilient infrastructures and constructions,
- an increase in construction materials reuse,
- a less disruptive approach to retrofitting,
- a more manageable density.

CHAPTER II:

SELF-BUILT ARCHITECTURE

“Building and action interpenetrate in the courtyards, arcades, and stairways. In everything they preserve the scope to become a theater of new, unforeseen constellations. The stamp of the definitive is avoided. No situation appears intended for ever, no figure asserts its ‘thus and not otherwise’.”⁴⁶

—Walter Benjamin

“The housing problem in the world will only be solved if we are able to combine top-down public policies with bottom-up self-construction capacity.”⁴⁷

—Alejandro Aravena & Andrés Iacobelli

In response to the rise of informalism as a fundamental urban morphology, would approaches that involve users in the construction process alleviate the issue? In so doing, what other benefits would these approaches entail?

RISE OF INFORMALISM

The bottom-up approach to architecture, as ‘Architecture without Architects’, was once the norm outside of outstanding edifices, as vernacular architecture. It is now relayed to the deplored slums or other informal developments, as it was deemed obsolete where comfort has superseded survival and become the norm. However, their prevalence is today indisputable: in 2006, about 1 million persons⁴⁸ — representing over a quarter of the urban population in 2013⁴⁹ — still resided in informal settlements. It represents “the major morphology through which cities have absorbed the massive urbani-

46. Walter Benjamin, “Naples,” in *Reflections : Essays, Aphorisms, Autobiographical Writings*, trans. Edmund Jephcott (New York : Harcourt Brace Jovanovich, 1978): p. 165–166.

47. Alejandro Aravena and Andrés Iacobelli, *Elemental: Incremental Housing and Participatory Design* (Ostfildern: Hatje Cantz Verlag, 2016): p.19.

48. UN-Habitat, *The State of The World’s Cities* (London: Earthscan, 2006) as cited in Kim Dovey, “Informalising Architecture: The Challenge of Informal Settlements,” *Architectural Design* vol. 83 no. 6 (November 2013): p. 82–89 (83).

49. UN-Habitat, *Streets as public spaces and drivers of urban prosperity* (Nairobi: UN-Habitat, 2013) as cited in William Robert Avis, *Urban Governance: Topic Guide* (Birmingham: GSDRC, University of Birmingham, 2016): p. 23.

sation of the past half-century.”⁵⁰ After all, it seems one type of urban development has resisted the norm of housing, counterbalancing its supposed prevalence. Considering informal settlements predominantly develop in the interstitial space left by top-down urban developments, they participate in creating a increasingly polarised environment. (fig. 2.01)

THE VERNACULAR & THE INFORMAL

Vernacular architecture, akin to what we previously described as dwelling as opposed to housing, is the product of a traditional way of building, corresponding accurately to localised customs, cultures and environments. On the contrary, informal settlements often represent a transgression by the inhabitant, regarding urban planning, building code and land ownership.⁵¹ More importantly for architects, it represents a transgression and a departure from their generally accepted role of designer and potential builder. However, both vernacular and informal architecture obey the imperatives of survival rather than comfort, beyond the authority of collective planning. In this regard, both can be regarded, to some extent, as efficient and lean solutions operating under conditions of scarcity and basic necessity, capable of offering a contribution to the architectural discourse.

TOWARDS HYBRID SOLUTIONS

Contrary to vernacular architecture which has been time and time again a source of inspiration for architects of the 20th century, such as Aldo van Eyck’s notorious fascination for Dogon building tradition, informal settlements were, with a few exceptions, for the most part leaved out of the mainstream architectural discourse. Yet, the subject has more recently, at the turn of the 21st century, been gaining momentum from both expert and lay perspectives. For architects, this attention has been also diverted towards attempts to, deliberately or otherwise, hybridise informalism with products of architectural practice.

While the previous studied approaches pertained to dividing the work produced by the architect between collective use and individual use, and between urban infrastructure and dwellings, other solutions examined in this chapter explore attempts to cede parts of both the design and building process to the inhabitants themselves. As hybrid approaches between conventional top-down architecture and its informal distant relative, these types of solutions have been

50. Dovey, “Informalising Architecture: The Challenge of Informal Settlements,” *op. cit.*: p. 83.

51. *Ibidem*: p. 83.



Villa Zolia and Guzmán Blanco Barrios, Caracas, Venezuela FIG. 2.01

mainly involved in regions of the world where informalism took hold, that is, the Global South. Indeed, these hybrid solutions often result from an economy of means in a context of urgent need of accommodation, in the same way as informal architecture.

INFORMALISM IN THE SPOTLIGHT

The 13th iteration of the international architecture exhibition at the Biennale di Venezia, held in 2012, was marked by two exhibitions bringing into the spotlight explorations of partially self-built alternatives to either top-down or bottom-up approaches in the Global South, sparking and signaling a renewed interest in the subject. These exhibitions showcased the work of Alejandro Aravena's practice 'Elemental', (fig. 2.02) a self-professed urban-oriented "Do-Tank,"⁵² and interdisciplinary design practice Urban Think Tank, the latter ultimately awarded the Golden Lion for Best Project. Four years earlier, in 2008, Aravena was already awarded the Silver Lion for Promising Young Architect at the 11th international architecture exhibition at the Biennale di Venezia, and his reputation was further cemented as recipient of the 2016 Pritzker Prize. In the same year, the architect went on to curate the 15th international architecture exhibition at the Biennale di Venezia, evocatively titled 'Reporting from the Front'.

52. Aravena, *Elemental: Incremental Housing and Participatory Design*, op. cit.: p. 50.

For their 2012 exhibition at the Biennale di Venezia, titled 'Gran Horizonte', Urban Think Tank had recreated a temporary traditional Venezuelan arepa restaurant, (fig. 2.03) imported inside the Arsenale, showcasing their documentary work on Torre David, an improvised and illegal occupation of a failed skyscraper development project located in the heart of Caracas. (fig. 2.04 & 2.05) Built during a brief period of relief surrounded by periods of economic upheaval, the 45-storey tower formerly known as Centro Financiero Confinanzas, was, prior to its unlawful occupancy, intended to host offices and various high-end accommodations. Its occupation by a group of now evicted informal dwellers started in 2007, after its construction was indefinitely halted in 1994 following an economic collapse in Venezuela and the death of the tower's main developer David Brillembourg a year before.

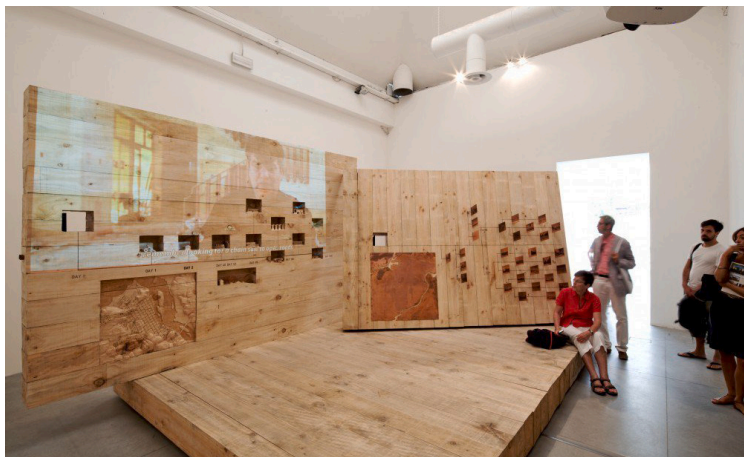
In the case of Aravena's practice Elemental, exhibitions were also oriented towards informal settlement in the global south, with an emphasis of the architect's efforts to work out an incremental approach to public housing, taking into account already existing informal building processes. This approach to inexpensive architecture most contributed to Aravena's award winning streak and prominent position.

SPARKING CRITICISM

While these exhibitions, in a general context of enthusiasm from the media, signaled a renewed interest in informal settlements, they also sparked a broader debate. Critics were mainly focused on the patronising gaze of the western perspective looking beyond this 'Gran Horizonte' — the equator — in the direction of the Global South and how, mainly in the case of Aravena, this was used as a way to access to the status of 'starchitect' by feigning social concern. Argentine architecture professor and critic Fredy Massad, one of their main detractor, wrote in 2017 in a piece titled *The Stardom of Demagogy*:

"Aravena had been paving his way to the star-architects arena through a carefully constructed narrative of his project and his persona. Rather than the actual project, it felt as though the Silver Lion had been awarded to that seductive presentation of scarcity as (apparent) stimulus for creativity, innovation and moral renovation embodied in Aravena's charismatic figure."⁵³

53. Fredy Massad, "The Stardom of Demagogy: another Wrong Move," TRANSFER Global Architecture Platform, February 7, 2017, www.transfer-arch.com/stardom-demagogy. Accessed November 23, 2020.



'The Magnet and the Bomb' exhibition,
13th Biennale di Venezia

FIG. 2.02



'Gran Horizonte' exhibition, 13th Biennale di Venezia

FIG. 2.03



FIG. 2.04 & 2.05

Torre David, Caracas, Venezuela

As for the ‘Gran Horizonte’ exhibition on Torre David, it has been notably accused of opportunism, for instance by Venezuelan architect Oscar Tenreiro, who blamed Urban Think Tank for using misery as a platform in an international art forum.⁵⁴ Again, the ‘exploration’ of the tower has also been compared to that of South America in colonial times,⁵⁵ and the exhibition was critiqued for its superficiality:

“It told the Venezuelans’ remarkable stories half of the time, but then ruined it by drifting off into wordless visual reveries about the beauty of the semi-ruined tower.”⁵⁶

Urban Think Tank nonetheless partly embraced the controversial nature of the project, by including in their exhibition articles and letters surrounding it.

54. Oscar Tenreiro, “Cinismos Análogos,” *Entre lo cierto y lo verdadero*, August 25, 2012, www.oscartenreiro.com/2012/08/25/cinismos-analogos/. Accessed November 25, 2020.

55. Dan Hancox, “Enough Slum Porn: The Global North’s Fetishisation of Poverty Architecture Must End,” *Architectural Review*, August 12, 2014, www.architectural-review.com/essays/enough-slum-porn-the-global-norths-fetishisation-of-poverty-architecture-must-end. Accessed November 23, 2020.

56. *Ibidem*.

TORRE DAVID: A MODEL?

Despite harsh criticism, Torre David offers a unique instance of completely isolated interventions from both architects and residents, both in terms of design and production. Moreover, it also provides an equally significant unparalleled account of informalism in the context of vertical urban density.

While critics were largely directed at the perspective provided by Urban Think Tank and the context in which they did, the relevance of the squatted tower as an object of study was more rarely challenged. More precisely, is the model worth studying, more so than other barrios? While the ingenuity of the inhabitants was seldom questioned, some critics did not see Torre David as displaying better living conditions than other informal settlement Caracas. For instance, a study of resident satisfaction concluded that the quality of life in the tower was not necessarily superior than that in other barrios.⁵⁷ In fact, in 2013, more than 15 percent of the inhabitants were considering moving into public housing, and another 45 percent were willing to. In comparison, in Petare, a more eccentric barrio located in Caracas' metropolitan area, only 15 percent of residents were willing to do the same in 2012.⁵⁸ In this sense, it seems as if the derelict tower actually offered worse living conditions.

This difference could be explained by different reasons relating to the initial destination of the building: concentrated lawlessness stemming from the settlement's high density, overall lacking investments on the part of residents compared to many barrios, lack of accessibility and adequate water supply due to its important height, human density exceeding the originally expected levels resulting in a lack of light, ventilation and air quality. The main sources of resident dissatisfaction were, by order of importance, the lack of vertical transportation, the levels of crime, and the inadequate water service,⁵⁹ all issues stemming from the translation of the density and compact land covering of the barrios into an incomplete tower. While the lack of lifts and efficient water service were correctly assessed by Urban Think Tank and subsequently integrated in their projected intervention,⁶⁰ the issue of criminality which in a way was the most controversial issue, was overlooked. Lastly, the lack of residents' investment in accom-

57. Jean M. Caldieron, "From a Skyscraper to a Slumscraper: Residential Satisfaction in "Torre de David" Caracas, Venezuela," *The Macrotheme Review* vol. 2 no. 5 (Fall 2013): p. 138–152 (151).

58. *Ibidem*: p. 147.

59. *Ibidem*: p. 144.

60. Urban Think Tank, Iwan Baan and Eidgenössische Technische Hochschule Zürich, *Torre David: Informal Vertical Communities* (Zürich: Lars Müller, 2013).

modations could be explained by the fact that, while at large barrios dwellers were emboldened after access to housing was enshrined in the Venezuelan constitution in 1999 early in Hugo Chavez' presidency, Torre David residents faced more uncertainty towards land tenure — and were ultimately proved right — due to its perception as an initially high-end construction project.⁶¹

Would the Torre David be an adequate support structure? Habraken noted that support structures and incomplete structural skeletons of unfinished projects, although superficially similar, are of significantly different nature,⁶² the former being characterised by simplicity:

“As the future content of the support structure can be known only in very general terms, its form and construction must be of the utmost simplicity.”⁶³

Indeed, in this context a support structure integrating self-building principles would aim to lay an adequate groundwork for subsequent occupation by the inhabitants, while the Torre David skeleton is marked by ‘the stamp of the definitive’. This would entail that the occupation of Torre David was possibly doomed to failure.

Residents ultimately began to be evicted out of the tower in the middle of 2014,⁶⁴ undermining the very foundations of Urban Think Tank's vision. However, the attractiveness of the tower's location, which was intrinsically linked with its vertical nature, was the primary source of resident satisfaction through proximity and access to transportation.⁶⁵ In that regard, Urban Think Tank retrofitting strategy was more adequate than the relocation that ultimately ensued.

FILLING THE GAPS

Urban Think Tank was much less critiqued than Aravena for the content of their proposal and their general approach to architecture in informal settings. In 2014, after the eviction of Torre David residents, Urban Think Tank co-founder Alfredo Brillembourg asserted a month later that “the point was never to preserve what was destined

61. Caldieron, “From a Skyscraper to a Slumscrapper: Residential Satisfaction in “Torre de David” Caracas, Venezuela,” op. cit.: p. 151.

62. Habraken, *Supports: An Alternative to Mass Housing*, op. cit.: p. 61.

63. Ibidem: p. 61–62.

64. “Venezuela Tower of David Squatters Evicted,” BBC News, July 22, 2014, www.bbc.com/news/world-latin-america-28426529. Accessed December 9, 2020.

65. Caldieron, “From a Skyscraper to a Slumscrapper: Residential Satisfaction in “Torre de David” Caracas, Venezuela,” op. cit.: p. 145.

to be a temporary and improvised reality.”⁶⁶

In what seems an answer to the criticism of the ‘Gran Horizonte’ exhibition, Brillembourg acknowledged Urban Think Tank’s paradoxical and heterogenous practice — one that tries to bring the diametrically opposed worlds of Venezia and Venezuela together — by underlining its “goal to produce a new entrepreneurial architect” as an hybrid of both a “renaissance master” and “urban hustler” filling in turn the different roles of “ambassador, diplomat, spy, reporter and guerilla builder.”⁶⁷ In fact, he actively advocates for architects to claim more agency by expanding their skills:

“We still believe that the architect needs to learn more about politics, more about economic realities, to solve complexity. The top-down type of authoritarianism kills the architect as an entrepreneur and facilitator of the needs and desires of a particular community.”⁶⁸

One of the major aspects of informal settlements’ morphology is their use of “interstitial and of marginal use” of the “terrain vague of the city.”⁶⁹ These sites include “urban waterfronts and escarpments,” “interstitial easements lining transport infrastructure of freeways and railways,” “ex-industrial and ex-institutional enclosures” and “back-stage spaces behind formal street walls.”⁷⁰ The lining of transport lines notably reminisces Yona Friedman’s Bridge-Towns — a more contextual variant of his ‘Ville Spatiale’ — and other infrastructure-oriented megastructures evoking the Ponte Vecchio.

Here lies the fundamental difference that divides the work of Elemental from that of Urban Think Tank: while the former merely acknowledges informal construction techniques, the latter draws from informalism its general approach and land-use strategy of ‘filling the gaps’. In an interview in 2012, Alfredo Brillembourg asserted that

66. Charlotte Skene Catling, “The naked truth architecture or revolution,” *The Architectural Review* no. 1414 (2014): p. 95-101 (100).

67. *Ibidem*: p. 101.

68. “THE INDEPENDENT. Urban-Think Tank | MAXXI,” November 16, 2017, www.maxxi.art/en/events/the-independent-urban-think-tank/. Accessed December 12, 2020.

69. Dovey, “Informalising Architecture: The Challenge of Informal Settlements,” *op. cit.*: p. 84.

70. *Ibidem*.



FIG. 2.06 Metro-Cable, San Agustín Barrio, Caracas, Venezuela

“Haussmannization is no longer a viable solution.”⁷¹ Indeed, this strategy of ‘filling the gaps’, a bottom-up approach to top-down settings, could be very well described as the very antithesis of Haussmannian interventions as strictly top-down remedies to informal contexts.

Brillembourg invoked the term ‘Urban Acupuncture’ to describe their approach more accurately.⁷² Acupuncture is, after all, nothing but a precise, lightweight, localised and careful intervention. While Urban Think Tank’s documentation and hypothetical intervention in Torre David were heavily featured in the media, their actual built interventions in Caracas which are numerous and punctual, were mostly ignored: a church, a school for children with autism, a metro-cable, (fig. 2.06) a vertical gym.

71. Scott Cartwright, “Interview with Alfredo Brillembourg about Torre David and the Future of the Global South | Rice Design Alliance,” www.ricedesignalliance.org/interview-with-alfredo-brillembourg-about-torre-david-and-the-future-of-the-global-south%25e2%2580%25a8. Accessed December 12, 2020.

72. Catling, “The naked truth architecture or revolution,” op. cit.: p. 100.



FIG. 2.07

CASE-STUDY II:

QUINTA MONROY

Architects: Alejandro Aravena & Elemental

Location: Iquique, Chile

Completion: 2004

OVERVIEW

The housing development of Quinta Monroy, in Iquique — a city in northern Chile with a population of just under 200000,⁷³ located a little less than 1500 kilometers away from the capital, Santiago — is Elemental's first case in a long series of similar projects throughout Chile. It consists in an incremental approach to a 'tear-down and re-build' intervention of an existing informal settlement, (fig. 2.09) after a purchase of the land by the state-run Programa Chile Barrio, following a long judicial process and thirty years of failed initiatives.⁷⁴

ELEMENTAL

While Elemental's origins can be traced back in 2000 when it was first conceptualised by Alejandro Aravena, Pablo Allard and Andrés Iacobelli,⁷⁵ the practice was only formally founded in its current form as a company in 2006, two years after the completion of their path-breaking project in Quinta Monroy.⁷⁶ Elemental was, in its infancy, primarily focused on public housing,⁷⁷ before expanding into more 'iconic' projects later on, a development which partly fueled the controversy around their practice.

PRIOR ANALYSIS

The development of this pilot project is based on a prior analysis of the social housing landscape and existing public policy. In so doing, they identified three different typologies found in the existing offer in public housing: namely, the detached house, the row house and the multi-storey building. Moreover, they recognised two main problematic components of a public housing strategy that often priv-

73. "UNdata," data.un.org/. Accessed January 2, 2021.

74. Aravena, *Elemental: Incremental Housing and Participatory Design*, op. cit.: p. 39.

75. *Ibidem*: p. 28.

76. *Ibidem*: p. 47.

77. *Ibidem*: p. 30.

ileged quantity over quality:⁷⁸ reducing interventions and displacing populations.⁷⁹ These two issues were respectively addressed by an approach combining incrementalism and localism.

INCREMENTALIST APPROACH

Oftentimes, the reduced square footage found in conventional Chilean public housing projects results in informal incremental extensions carried out by residents. In this regard, Elemental's incremental approach is not a strict innovation per se, but an acknowledgment of pre-existing incrementalist building habits, making good use of the inhabitants' proficiency in informal construction.⁸⁰ In the context of Quinta Monroy, this approach is all the more relevant due to the pre-existence of an informal settlement: residents themselves provided interior paint, floor and ceiling finishes,⁸¹ furnishings, appliances, exterior finishes, and additional floors.⁸²

As Elemental stated, the innovation lies elsewhere, in their strategy of building "half a good house" instead of "one small house,"⁸³ effectively taking into account the subsequent informal and incremental building process. (fig. 2.08) In so doing, their approach does not question the existing stance concerning minimal interventions in public housing, going as far as integrating it as a core component of their strategy.

Another outcome of the conventional strategy of reduced square footage is the small size of rooms, resulting in low spatial qualities and fewer furnishing possibilities.⁸⁴ To tackle this issue, housing units in Quinta Monroy contain fewer larger rooms, allowing not only for more flexibility of furnishing and partitioning, but also for a more coherent incremental expansion. Indeed, rooms are progressively added rather than expanded, reducing the need for tearing down existing elements.

78. Ibidem: p. 31.

79. Ibidem: p. 14.

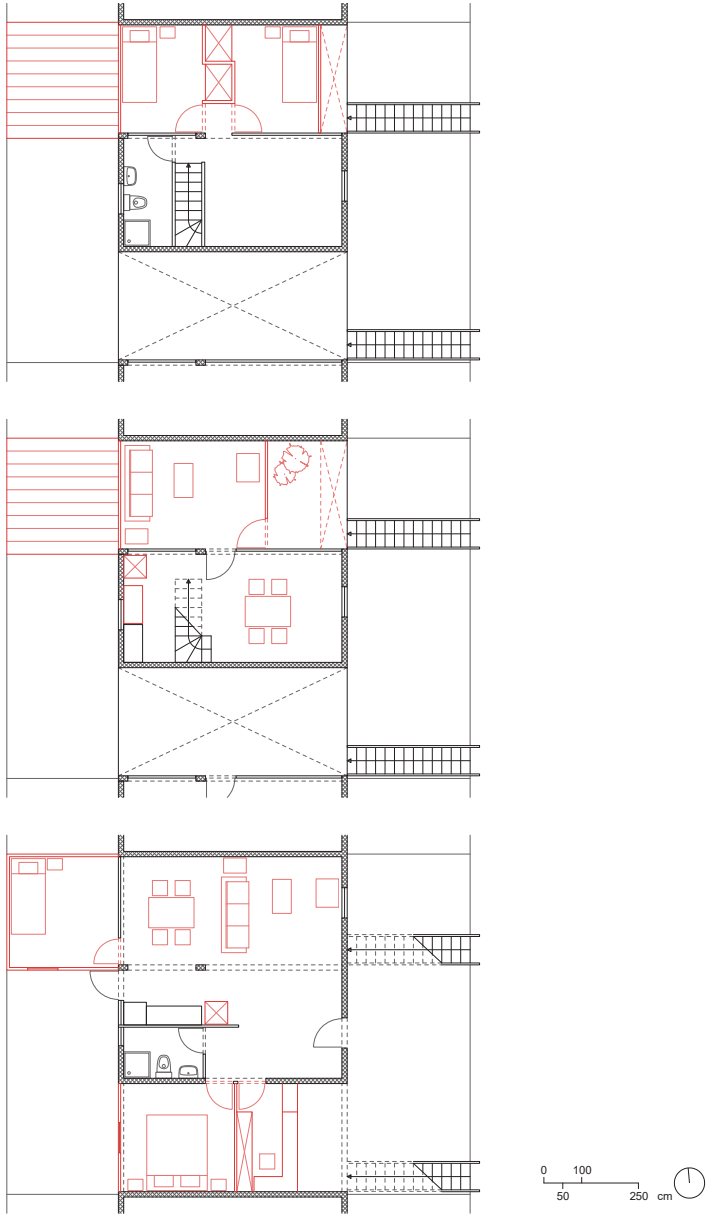
80. Ibidem.

81. Ibidem: p. 158.

82. The possibility to add an additional floor is limited to a single portion of top-floor duplex housing units.

83. Ibidem: p. 17.

84. Ibidem: p. 66.



Plan with potential incremental additions

FIG. 2.08

Additionally, this response to incrementalism was especially essential in the seismic context of Chile, as alterations to minimalist social housing projects often threaten the structural integrity of the whole, potentially leading to disastrous events during seismic events. This phenomenon is all the more critical in the case of multi-storey buildings.

LOCALIST APPROACH

Another fundamental principle of Elemental's "half-built" approach to housing is their commitment to not relocate the population, except temporarily, in contrast with existing public housing strategies. To do so, a density similar to that of the original informal settlement was assumed, projecting to accommodate all 106 households on the same site. This effort mainly aims to foster more durable communities by avoiding their disruption. Tangentially, the higher density achieved under these objectives serves to alleviate issues of urban sprawling, therefore positively impacting Iquique on a large scale.

Moreover, the reduced intervention is also justified as a means to invest more substantially in the site,⁸⁵ privileging the more valuable location of Quinta Monroy. This effort to not relocate residents contrasts with conventional public housing projects, for which developers would usually reduce the financial impact of land value by relocating to more eccentric and less desirable areas.

LOW-RISE HIGH-DENSITY

Self-building here implies living on the premises during the incremental construction process, which in turn implies the provision of basic accommodation before the incremental process begins. To do so, the minimalist base building is incrementally developed outwards, as opposed to instances of nested architectures where the support structure is developed inwards by infills.

In contrast with Habraken's theory of Supports where density is integrated through vertical development, multi-storey buildings here appear inadequate: vertical growth is limited to the top floor, and horizontal growth to the ground floor.

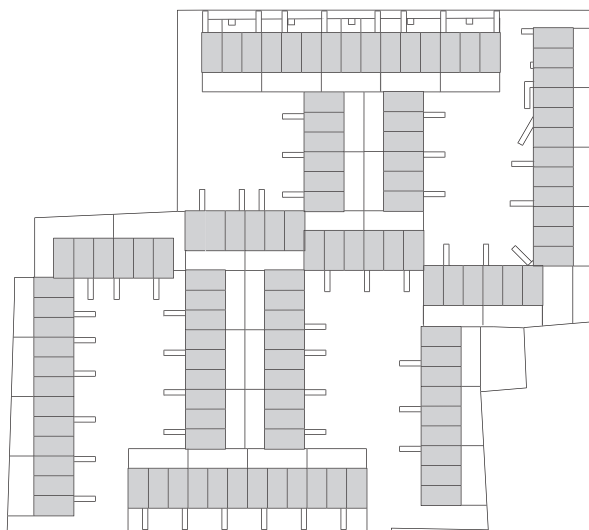
For this reason, merging both strategies of incrementalism and localism, Quinta Monroy's typology, which arose during early phases of the project, followed a low-rise high-density scheme, the closest existing public housing typology being the row house. (fig.

85. Ibidem: p. 65.



Site plan before intervention

FIG. 2.09



Site plan after intervention

FIG. 2.10

2.10) The first solution reached by Elemental was found by essentially planning two different types of incremental growth, both horizontally for ground-floor housing units and vertically for the top-floor ones.⁸⁶ This strategy was then slightly revised in an effort to structurally anticipate vertical growth, providing duplex top-floor apartments and integrating capacity for lateral growth of these units by incrementally adding infill and envelope.

INVESTMENT OPPORTUNITY

In Chile, public housing is mainly financed through housing market subsidies since 2001,⁸⁷ turning residents into owners.⁸⁸ The strategy of reducing interventions and displacing populations was mainly aimed at eliminating reducing costs, and thereby the “hidden subsidy”⁸⁹ of public housing owner’s debt.

Oftentimes, both initial expenditure and incremental additions represent for the owner a depreciating investment in itself, providing value through use only. This depreciation is mainly due to the poor location of accommodations, the spatial segregation resulting from it,⁹⁰ and the low quality of incremental additions not being properly considered during design. By diverting more of the funding towards land costs and allowing more coherent incremental development, Elemental aims to offer longer-term appreciating investments, where both initial construction and subsequent expansion would provide durable added-value to properties.

A CONTENTIOUS PROJECT

Not only Aravena’s approach was seen as a “reversal of ‘star-architecture’ by means of another kind of ‘star-architecture’,”⁹¹ but the qualities of the architecture it produced were called into question, addressing an apparent wide gap between words and deeds. One of the first contentious issues of this project is the paradoxical nature of an incremental project that, in the first place, relied on demolition and eviction with the help of the police. Of course, this issue was partially offset by an effort to not relocate residents. However, because of conflicts and differences, not all residents were rehoused.

86. Ibidem: p. 37.

87. Before 2001, public housing was funded through residents personal subsidies, with the similar goal of turning them into owners

88. Ibidem: p. 64.

89. Ibidem: p. 65.

90. Ibidem: p. 57.

91. Massad, “The Stardom of Demagogy: another Wrong Move,” op. cit.



The neighborhood in 2014

FIG. 2.10

Secondly, housing development such as Quinta Monroy were seen as an innovative but pragmatic embodiment of austerity policies rather than humanitarian aid. Because Aravena sees public housing as having intellectual merit, he argues that his reasons is not entirely humanitarian, which would be necessary but insufficient.⁹² Indeed, Elemental's discourse does not seem concerned by social housing funding, in what they call a 'realist' and 'pragmatic' approach⁹³ to working with the existing social housing policy.

Moreover, their approach to incrementalism, where the residents invests as owner, subscribes to a model of housing market subsidies in the guise of public housing, effectively getting poorest residents into debt.⁹⁴ This complete acceptance of market forces appears in line with two of Elemental's most important clients, patrons and sources of funding: the Pontifical Catholic University of Chile and Roberto Angelini Rossi through COPEC and its parent company AntarChile. While the former is a private university with historical ties to the 'Chicago Boys' group of economists who shaped Chile's economic policies of free market capitalism under Augusto Pinochet's dictatorial regime, the latter is the chairman of one of the country's leading

92. Aravena, *Elemental: Incremental Housing and Participatory Design*, op. cit.: p. 32.

93. *Ibidem*: p. 30.

94. Olivier Namias, "Half a good home isn't enough," *América Latina en movimiento*, April 18, 2016, www.alainet.org/en/articulo/176832. Accessed December 12, 2020.

conglomerates.⁹⁵ At first glance, Elemental seems keen to transpire a ‘non-political’ brand of pragmatism, but they are certainly not without any political attachments.

GREAT DISTANCES

Chile is a country of great extremes and great distances. Geographically, the country ranges from the world’s southernmost continental point — with the exception of Antarctica — in Tierra del Fuego to the Atacama desert to the north, and west to east, from the Pacific ocean to the world’s longest mountain range: the Andes. Economically, 10 percent of the population held a more than seven times more important share of total income than half of the country’s population in 2004,^{96,97} effectively ranking Chile as one of the most unequal OECD countries.^{98,99}

In this regard, Elemental’s approach lacks horizontal relationships: it seems a great social distance separates architects from residents. Even geographically, the architects’ offices are located in the capital, a little less than 1500 kilometers away from the site of Quinta Monroy. The exhibitions at the Biennale di Venezia have been criticised as aimed to “delight the patronising eurocentric gaze”¹⁰⁰ looking over the ‘Gran Horizonte’. In this context, the emphasised experimental nature of Quinta Monroy and other subsequent similar projects — which Elemental openly stated — only widens the gap between architects and users: scarcity becomes an apparent opportunity for the architects to do their own experiments, which would not be accepted in a different setting.

FAILED EXPERIMENT?

In the case of Quinta Monroy, while Elemental observed and documented positive incremental changes at different times, as part of their experiment but on a relatively short time-frame,¹⁰¹ more re-

95. Ibidem.

96. This effectively means that the mean income of the top 10 percent is 35 times more important than that of the bottom half of the population.

97. “Chile,” World Inequality Database, wid.world/country/chile/. Accessed January 2, 2021.

98. As of 2004, Chile was not part of the OECD yet, of which it became a member in 2010. However, this assertion is true today, and would have been if we compared Chile with OECD countries in 2004.

99. “Chile Should Use Upturn to Address Low Productivity and High Inequality - OECD,” www.oecd.org/economy/chile-should-use-upturn-to-address-low-productivity-and-high-inequality.htm. Accessed January 2, 2021.

100. Massad, “The Stardom of Demagogy: another Wrong Move,” op. cit.

101. Aravena, *Elemental: Incremental Housing and Participatory Design*, op. cit.: p. 142–189.

cent accounts of the state of the housing complex painted a different picture of the results. (fig. 2.10) Indeed, different negative outcomes were described in 2013: “no hot water, faulty masonry, minimal finishing, and very poor quality materials.”¹⁰² This underlines another aspect of concrete experimental design other than optics, mainly the durable impact that failed experimental projects can leave. Finally, while one may have imagined such experimentation would yield extremely different results based on a variety of concepts and depending on context, Elemental’s approach seems to have produced a lot of similar subsequent projects and no real advancement apart from the initial design.

102. Namias, “Half a good home isn’t enough,” *op. cit.*

CHAPTER II:

CONCLUSION

The first step towards a successful integration of self-building practices may be acknowledgment, which is nonetheless not enough on its own, as Elemental's 'half-houses' proved to be. Moreso, the added-value found in user participation to the construction process seems to be an option only restricted to the poorest already self-building slum-dwellers. Urban Think Tank and Elemental are often lumped together for their superficially similar interests, but it appears that Aravena's practice, while acting as an intermediate between authorities and public housing recipients, does not provide any real feedback towards policy, whereas Alfredo Brillembourg is more interested in architects endorsing new roles and impacting policy-making, which may be the key to the success and acceptance of these novel self-building strategies. This would indeed call for new forms of practice, defying the model of the famed 'starchitect' and capable of building more horizontal relationships with current or future residents.

To conclude, most of the added-value found in partially self-built architectures can be summarised in five key points:

- a greater consideration of residents' potential proficiency in construction,
- more adapted accommodations,
- more potential for further investment in existing construction,
- a more manageable density,
- better located accommodations.

CHAPTER III:

RETHINKING PRACTICE

“Architecture appears as the exercise of an arcane and privileged aesthetic code.”¹⁰³

–Reyner Banham

“The architectural profession has siloed itself.”¹⁰⁴

–Chris Bryant, Caspar Rodgers & Tristan Wigfall of Alma-nac

QUESTION

In response to architects’ apparent loss of agency coupled with an increased perception of their production as self-referential, how can architects challenge their contemporary role, leading to new extended forms of practice?

ARCHITECTS LOSING GROUND

An increasing density, scale and complexity of architecture, and a growing reliance on self-referential principles and building technology, all participated in the expansion of the architect’s role at the expense of users. Today, we may wonder: is it really architects, and not architecture, who hold an increasingly important role in shaping the built environment? Indeed, the contemporary self-referential architectural discourse, the visions of architects as producers of images and icons, and the creeping presence of marketing and finance imperatives, all apparently hurt the image of architects playing a fundamental and interactive role in shaping the built environment.

ARCHITECTURE HAS SILOED ITSELF

According to Habraken, during the shift from the profession of master-builder to that of architect during the Renaissance, Andrea Palladio was largely instrumental in developing the emerging professional network, marking the beginning of a growing and persistent

103. Reyner Banham, “A Black Box: The Secret Profession of Architecture,” *New Statesman & Society*, vol. 3 no. 122 (October 12, 1990) as cited in Chris Bryant, Caspar Rodgers and Tristan Wigfall of Alma-Nac, “The Changing Forms and Values of Architectural Practice,” *Architectural Design* vol. 88, no. 5 (September 2018): p. 6–13 (7).

104. Bryant, “The Changing Forms and Values of Architectural Practice,” op. cit.: p. 7.

influence of Architects on the built environment.¹⁰⁵ Moreover he credits Palladio as the first writer of an automonographic work^{106,107} and in so doing, inspirer of a nascent self-referential and image-based (fig. 3.01) culture of “published architecture”¹⁰⁸ attached to the profession. Indeed, Palladio’s prints did not mention any context¹⁰⁹ and by exporting his architectural discourse beyond the italian peninsula’s border, helped create a new professional network of architects bound by an “architecture without a context.”¹¹⁰

This may represent the beginning of a long process of both growth and increasing isolation of the architectural profession, leading more recently to what could be seen as a profession that “has siloed itself.”¹¹¹ Already in his theory of Supports Habraken saw the absence of user participation as hurting the role of architects and sought to re-establish a “natural relationship”¹¹² which would increase the agency of both users and architects.

THE CASE OF BRITAIN

In the example of post-war Britain, radical and large scale top-down housing designs from the public-sector were increasingly seen as products of a highly bureaucratic administration issued from the British ‘post-war consensus’ favoring welfare-state politics. As we have seen, in this era even theoretical projects calling for user involvement yielded over-scaled results: megastructures and metabolist architecture are cases in point.

In the year 1979, Margaret Thatcher rose to power by capitalising on this perspective, marking a shift towards a neo-liberal vision of architecture in Britain, but also in the western world in general. This new perspective mainly resulted in increased reliance on capitalist free market in the housing sector and disinvolvement of the state in public housing accomodation. Indeed, in Britain the proportion of architects working in the public sector plummeted from 49 percent in

105. Habraken, *Palladio's Children : Essays on Everyday Environment and the Architect*, op. cit.: p. 8.
106. Ibidem: p. 6.
107. Palladio's *Four Books on Architecture* are differents from those of his predecessors, as he focuses on his own work.
108. Ibidem: p. 8.
109. Ibidem: p. 9.
110. Ibidem: p. 8.
111. Bryant, “The Changing Forms and Values of Architectural Practice,” op. cit.: p. 7.
112. Habraken, *Supports: An Alternative to Mass Housing*, op. cit.: p. 18.

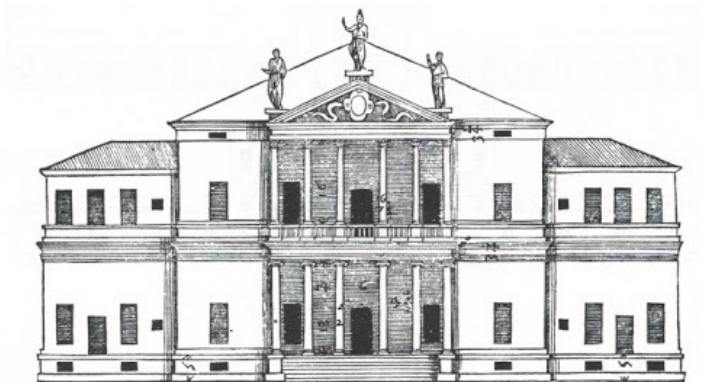
Plate from Palladio's *Four Books on Architecture*

FIG. 3.01

1976 to 0.7 percent in 2017.¹¹³ This growth of private-sector market share, triggered a transfer of agency from architects to private developers preoccupied by short-term revenue under a finance-oriented decision-making process.

NEW FORMS OF PRACTICE

In response to this loss of agency, architects who more recently entered the field — especially those who did so in the aftermath of the 2008 economic crisis — have explored new ways of practising architecture, seeking to expand the profession in order to find their place and broaden their potential sources of income.¹¹⁴ Some architects have returned to a more local and proactive practice,¹¹⁵ in contradiction with the model of the international ‘starchitect’. Localism enables a higher degree of interaction and, not only with users but with the public-sector, leading to more adequate and region-specific projects.

113. Finn Williams, “Finding the Beauty in Bureaucracy: Public Service and Planning” in eds. Richard Brown, Kat Hanna and Rachel Holdsworth *Making Good: Shaping Places for People*, (London: Centre for London, 2017) as cited in Finn Williams, “Designing Upstream: Rebuilding Agency Through New Forms of Public Practice,” *Architectural Design* vol. 88 no. 5 (September 2018): p. 104–109 (107).
114. Williams, “Designing Upstream: Rebuilding Agency Through New Forms of Public Practice,” op. cit.: p. 107.
115. Bryant, “The Changing Forms and Values of Architectural Practice,” op. cit.: p. 12.

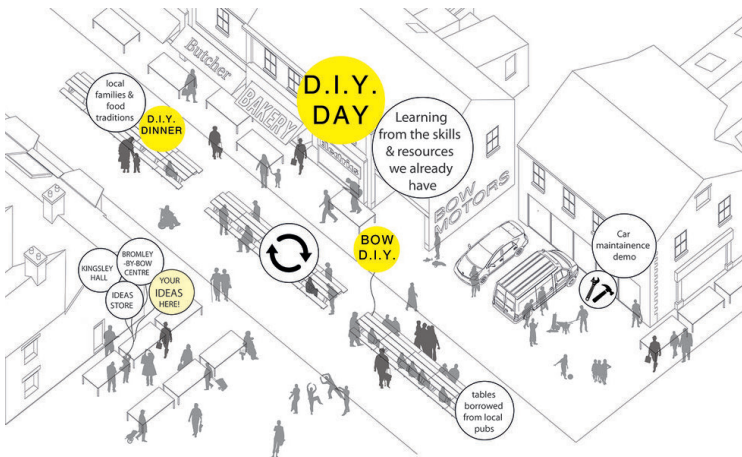


FIG. 3.02

Bow DIY, Alma-nac

URBAN ACUPUNCTURE

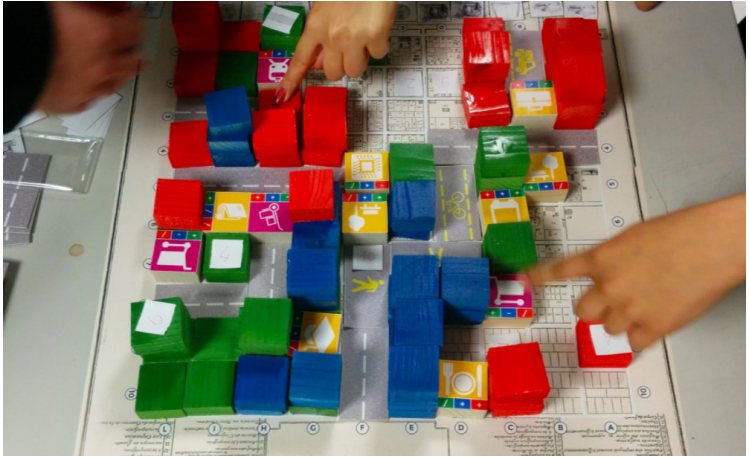
This careful attention to existing conditions, and willingness to turn them into opportunities is akin to what Alfredo Brillembourg identified as “Urban Acupuncture”¹¹⁶ in the context of Urban Think Tank’s multiple projected or built interventions in Caracas. At Torre David, Urban Think Tank envisions a light-weight and focused intervention, working with the pre-existing skills of the inhabitants, a strategy that echoes similar attempts in the Global North, such as Alma-nac’s ‘Bow DIY’.¹¹⁷ (fig. 3.02) In fact, while Urban Think Tank has mainly issues of the Global South in mind, its co-founder Hubert Klumpner advocates for application of the principles extracted from informal settlement in these regions to projects involved in marginal and underprivileged areas in the Global North.¹¹⁸

Urban acupuncture also overlaps with other rising trends of expanded architectural practice, such as ‘place-making’, an approach focused on public space, that also seeks not to disrupt existing communities by emphasising the concepts of ‘genius loci’ and place identity.

116. Catling, “The naked truth architecture or revolution,” op. cit.: p. 100.

117. In their communication project ‘Bow DIY’, Alma-nac visually map user skills.

118. Ibidem: p. 101.



Action! On the Real City, Urban Think Tank

FIG. 3.03

TOOLS OF THE TRADE

In order to apprehend these novel forms of practice, architects have also turned their attention towards new tools and means of communication, primarily aimed at users. Of course, closer ties with the layperson first call for a less self-referential discourse surrounding architecture, for less technical, less superficial and more lively visual representation, and more interactive tools.

In recent years, photorealistic architectural visualisation has become ubiquitous, while in the same time architects begin to move away from this type of representations in the design process. While high-quality visual representations are frequently justified as better tools for communicating designs to non-professionals, the non-professionals concerned are more often clients rather than users, except in the context of market-oriented visualisation. In fact, high-quality renderings more often tend to illustrate a spillover from ‘marketing’ into architecture and serve to promote financial interests.

Paradoxically, the need for an approach to architectural visualisation more rooted in concrete realities has led to increasing presence of more abstracted representation. In fact, realistic representation begins to be avoided because of its tendency to reduce



FIG. 3.04

School Vision Game, Die Baupiloten

architecture as a dematerialised and foretold ‘object’ extracted from its context, in a world of published and virtually ‘shared’ architecture. While abstracted representation may also serve a self-referential architectural discourse, some practices today turn to abstraction in order to produce novel user-oriented interactive tools and supports.

For Urban Think Tank, communication is one of their most critical tools, as made evident by their inclination towards film-making. As part of their exploration of new media, they for instance developed ‘Action! On the Real City’, an ‘urban’ game that aims to “facilitate decision-making and design processes to understand complex, real-life urban transformations” and is mainly intended for students.¹¹⁹ In another example, Berlin-based practice Die Baupiloten also developed interactive tools in the form of a game, the ‘School Vision Game’ (fig. 3.04) through which it established a process for analysing the wants and needs of future users of a school building project, in the initial phase of participative design.¹²⁰

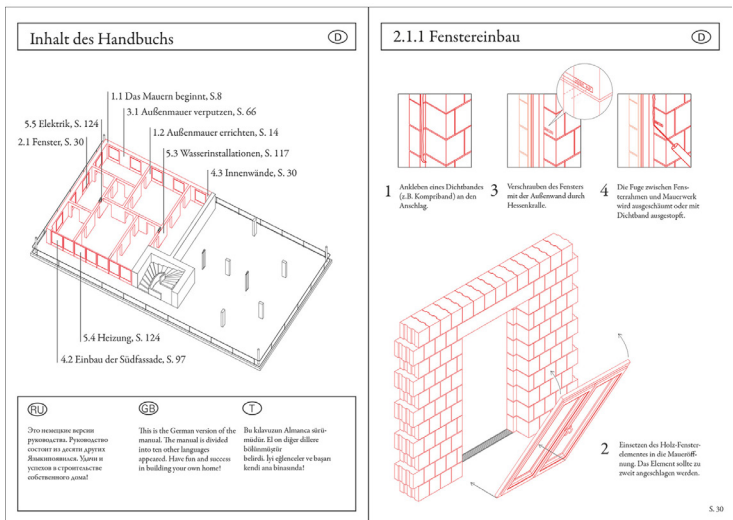
119. “U–TT | Urban Game: Action! On The Real City,” u-tt.com/project/action-on-the-real-city-5/. Accessed December 28, 2020.

120. Susanne Hofmann, “Participative Architecture: The Way to More Environmental Justice,” *Architectural Design* vol. 88 no. 5 (September 2018): p. 116–121 (119).



What Walworth Wants, We Made That

FIG. 3.05



Grundbau und Siedler handbook, BeL Architects

FIG. 3.06

More than just changing the codes of visual representation, other architects actively experiment in novel formats of printed material. In the context of their collection of projects ‘What Walworth Wants’, mainly centered around different transformations of public spaces, British practice We Made That developed an “accessible portfolio”¹²¹ (fig. 3.05) to work with local residents, market traders, enterprises, among others, outlining potential opportunities in their various projects and providing guidance on how to access public funds.¹²² For their ‘Grundbau und Siedler’¹²³ affordable housing project in Hamburg, designed around the idea of transposing self-building principles into an European setting, BeL Architect provided a handbook containing building instructions intended for future residents,¹²⁴ (fig 3.06) an approach reminiscent of IKEA’s revolutionary self-assembly principles developed in the fifties.¹²⁵

121. Holly Lewis, “Common Scales: From the Intimate and Human to the Strategic and Influential,” *Architectural Design* vol. 88 no. 5 (September 2018): p. 110–115 (114).
122. *Ibidem*: p. 112–114.
123. ‘Grundbau und Siedler’ could be translated from german into ‘Foundations and Settlers’, illustrating the approach of BeL Architects.
124. Hans Drexler, Joachim Schultz-Granberg and Klaus Dömer, *Affordable Living Housing for Everyone* (Berlin: Jovis Berlin, 2014): p. 72.
125. “The History of the IKEA Brand at a Glance,” about.ikea.com/en/about-us/history-of-ikea/milestones-of-ikea. Accessed January 2, 2021.



FIG. 3.07

CASE-STUDY III:

ASSEMBLE

Location: London, United Kingdom

Founded in: 2010

FOUNDATION

Founded in London in 2010 around 15 Cambridge students, Assemble is foremost an unconventional practice, identifying itself as a “multi-disciplinary collective working across architecture, design and art.”¹²⁶ Primarily involved in Greater London, the collective was formed around their first project, the Cineroleum, a self-initiated temporary installation transforming a derelict gas station into a semi-enclosed outdoor cinema. Their involvement in the project went beyond the design and construction of the installation : they were also the ones operating it.¹²⁷

OPEN STUDIOS

This blurring of the limits between architect and user was developed further in 2011, in the making of their first designated workplace, ‘Sugarhouse Studios’, when Assemble moved into a derelict industrial area in Stratford, Greater London. More than just designers of their workplace, they began their strategy of developing workshops shared with tenants, in a ‘coworking’ spirit. This coworking space was then expanded with an annexe, the ‘Yardhouse’, a project in which they participated in the construction. The new annexe also served as a theatrical backdrop for various events and helped cementing their reputation, mainly through social media. As the area was to be developed in the near future, this was from the start a temporary situation. However, their stay at the Stratford Sugarhouse Studios allowed Assemble to experiment on their future approach to creative workshops and workspaces. Indeed, benefiting from their rich experience, they more clearly formulated their approach and objectives in order to streamline their development of a new workspace and the search of new potential sites. This research resulted in their formulation of ‘Open Studios’. (fig 3.07)

126. “Assemble,” www.assemblestudio.co.uk/about. Accessed December 14, 2020.

127. “Maria Lisogorskaya Lecture: ‘Assemble: 3 Places’ | Rice Design Alliance,” www.ricedesignalliance.org/files/maria-lisogorskaya-lecture-assemble-3-places. Accessed December 14, 2020.

In 2014, they helped set up the Blackhorse Workshop, inspired by FabLab initiatives, which fueled their research by testing their model of common-pool resources, mainly in terms of space, knowledge, ideas and equipment. Today, the workshop functions more as an independent spinoff, as Assemble moved on other projects.

In 2017, their search for a new site concretised when they settled in another temporary location in an old college building located in Bermondsey, another neighborhood of Greater London. Their new workplace ultimately inherited the name of ‘Sugarhouse Studios’, and allowed them to perfect their strategy of sharing space with tenants, effectively enriching their practice by exchanging expertise, knowledge and sharing ideas. Today, Assemble has broadened the scope of its activities by designing, building then managing several creative co-working spaces in Greater London, under the name of ‘Assemble Workspace’.

GRANBY FOUR STREETS

Another important contribution from Assemble, in the field of participative architecture, is their multiple projects realised in the Liverpool neighborhood of Granby in the period between 2013 and 2019, more precisely in four streets where terraced houses were not demolished for newer top-down developments for budget reasons from the municipality — contrary to the rest of the neighborhood, unfortunately. The multiple projects were grounded on particular premises as they arose from a direct interaction between the architects and the residents, instead of developers or authorities. Indeed, Assemble’s team first met the local neighborhood association after being invited by the authorities to participate in a housing project which ended up never seeing the light of day.¹²⁸

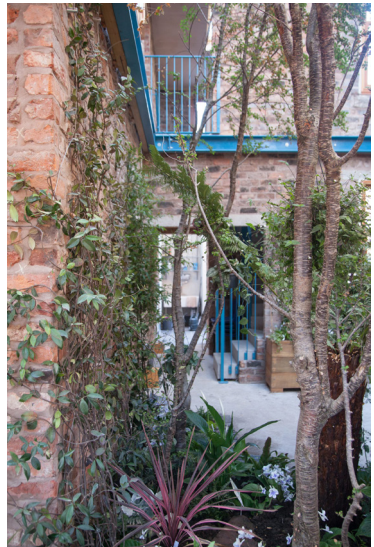
One of the projects was a creative space operated by local residents, the Granby Workshop, that notably produced ceramic tiles and door handles which served in the subsequent projects. (fig. 3.08) Another one is the remodeling and retrofitting of ‘10 Houses on Cairn Street’. The last project, completed in 2019, is a common winter garden built inside of two of the most derelict houses. This last intervention is seemingly unnoticeable from the street, due to it being mostly directed towards the interior of the existing ruined buildings. (fig. 3.09 & 3.10) This fact particularly reminisces an aspect of informal settlements: their use of “backstage spaces behind formal street walls.”¹²⁹

128. “Maria Lisogorskaya Lecture: ‘Assemble: 3 Places’ | Rice Design Alliance,” op. cit.
129. Dovey, “Informalising Architecture: The Challenge of Informal Settlements,” op. cit.: p. 84.



Ceramics produced by the Granby Workshop

FIG. 3.08



Exterior and interior view of the Winter Garden

FIG. 3.09 & 3.10

PUNCTUAL APPROACH

In the case of the 'Granby Four Streets', Assemble's approach could be qualified as 'urban acupuncture'. Indeed, the projects are realised at a small-scale, working with the existing without disturbing the built environment but aimed at achieving a substantial increase in quality of life of the inhabitants of an overlooked neighborhood. For instance the Winter Garden project little impacted the street facing facades and arose from the fact that some of the ruined houses were too derelict so that a complete renovation would be too expensive, mostly because of collapsed floors. Moreso, in the context of their creative workspace developments, Assemble's focus on 'brownfield' sites and derelict industrial areas reminisces of the approaches emphasising marginal and overlooked sites studied in the previous chapter.

COMMUNICATION TOOLS

For their project in Granby, their main client being a neighborhood association, Assemble's models are intentionally suited for communication with the inhabitants: inspired by doll-houses, their large scale et realism certainly provides an overview of the project grounded in reality. (fig. 3.11) In a similar way, alternative means of two-dimensional representation were also sought, notably by producing paintings rather than renderings. (fig. 3.12) Reminiscent of Lina Bo Bardi's drawings, the paintings provide what appears to be a much more accessible lay perspective, and were positively received by the inhabitants.¹³⁰

130. "Maria Lisogorskaya Lecture: 'Assemble: 3 Places' | Rice Design Alliance," op. cit.



Ceramics produced by the Granby Workshop

FIG. 3.11



Doll house model, Ten Houses on Cairn Street

FIG. 3.12

CHAPTER III:

CONCLUSION

Contrary to the previously explored approaches to middle-out architecture, rethinking practice does not involve a specific spatial solution. Certainly, as a novel and still growing phenomenon, architects pushing the boundaries of the profession seldom participate in large-scale developments. However, not only new means of representation and interactive tools of communication could spill-over into more conventional architectural practice, but they may entail acceptance of the more experimental approaches of partially self-built and nested architectures. Compared to the other approaches analysed, new forms of practice not only add value to architecture, but also to the profession of architect itself: architects could broaden their sources of income.

In conclusion, most of the added-value provided by challenging the role of the architect and developing new tools of communication could be summarised in five key points :

- a more horizontal relationship between architects and users,
- better communication between architects and laypersons,
- a practice enriched by non-professional knowledge and ideas,
- less disturbances of existing communities,
- more acceptance towards more experimental architectures.

CONCLUSION:

GOING FORWARD

COMPATIBILITY

All studied examples may help us in finding a ‘middle-ground between the hand of the architect and the need of and right to self-determination of the inhabitants’. Nested and self-built architectures both represent credible technical solutions to the question of how to produce ‘top-down designs that only withstand, but fosters bottom-up alterations and retrofitting’. While they provide overlapping results, architects have yet to combine them and fully explore their compatibility, even if it has been done to a limited extent by Elemental, with mixed results.

While informal architecture could be an endless source of inspiration to architects, it is still more difficult to fully implement self-building outside of the poorest and most marginal urban environments. However, increasingly complex architecture accompanied by a growing need for technical expertise should not overshadow the skills developed by the inhabitant themselves.

RESILIENCE

Most of the value middle-out architecture provides is linked to its resilience, as a longer term, sustainable investment. Longer-term investments generally require a higher degree of trust, that a less self-referential architecture and more horizontal relationships with residents might help foster. With today’s growing emphasis on sustainable development, a shift towards longer-term investments in the built environment may render these experimental approaches more viable and more common. Moreso, urban growth and evolving households may drive demand for a more adaptable architecture — rather than adapted — in the near future.

COMMUNICATION

As communicators, architects have the opportunity to bridge different worlds, such bottom-up and top-down approaches to architecture. However this cannot be done without focusing on improving the existing means of communication conventionally employed by architects. Moreso, representations of middle-out architecture should reflect ‘Architecture as a process’ rather than ‘Architecture as a finished process’.

EXPERIMENTATION

As evidenced by the cases of NEXT21, Torre David and Quinta Monroy, capacity-for-change inherent to nested and self-built architecture results in greater possibilities of concrete experimentation. Additionally, smaller-scale interventions, inherently more suited for experimentation, also present the opportunity for architects to instigate the projects themselves and encourage a more horizontal and durable relationship with users, which in turn fosters acceptance towards experimental projects.

Moreover, informal settings provide greater experimentation opportunities, such as Torre David that Urban Think Tank compared to an “urban laboratory.” Similarly, Assemble’s focus on soon-to-be-developed brownfields in the context their ‘Open Studio’ creative workspace experimentation can be explained by co-founder Maria Lisogorskaya assertion that “nobody cared what was happening there.”¹³¹ These possibilities resonate with Friedman’s vision of continuation of the trial-and-error design process into the building’s use.¹³²

SYNERGIES

One of the most important conclusions of this study is that architects do not have to necessarily encroach user participation in order to reclaim their agency. In fact, far from being a negative constraint, architects responding more closely to residents’ needs may provide the basis for endorsing new roles. In accordance with Habraken’s views expressed in *Supports*, the integration of capacity-for-change may enable both users and architects to exercise more control on the built environment, in a synergic way.

131. “Maria Lisogorskaya Lecture: ‘Assemble: 3 Places’ | Rice Design Alliance,” op. cit.
 132. Belogolovsky, “Interview with Yona Friedman: Imagine, Having Improvised Volumes ‘Floating’ In Space, Like Balloons,” op. cit.

APPENDIX

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