Synanthropic* Habitats

HOFJES AS THRESHOLDS FOR DIVERSE HUMAN & NON-HUMAN ENVIRONMENTS



ADVANCED HOUSING DESIGN - GRADUATION STUDIO

MICHALIS PSARAS | 2021-2022

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*sin-an-'thräp-ik: on the basis of Greek synanthröpeúesthai, synanthröpízein "to live with others"

GRADUATION REPORT (2021/22) | MICHALIS PSARAS

GRADUATION REPORT

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GRADUATION REPORT

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GRADUATION REPORT

ABSTRACT

Synanthropic Habitats originates from the interdisciplinary quest on 'how will we live together' and the personal fascination to critically question the deeply-rooted anthropocentric binary of human (us) and nature (them). The thesis aims to establish an innovative domestic environment that deals with the heterogeneity of people of different backgrounds while reflecting upon the global urgency of the Anthropocene by interacting with nature in a blended game of cohabitation.

The project forms its wider problématique from an amalgam of constituent problems deriving from Rotterdam and specifically Blijdorp as the site under investigation. The high traffic lane that dichotomizes the site, the noise and pollution of the nearby railway station, the large undefined spaces in tandem with the prevailing social degradation and the need for affordable housing provision are few of the identified issues of the project's location. As a response, the Synanthropic Habitats attempts to develop a new paradigm for Dutch housing design, based on the triptych of hofjes as a type, thresholds as interfaces and cooperatives as nomos.

The project draws from the long tradition of Dutch

hofjes as an archetypical sustainable domestic milieu, the epistemologies and multiscalarity of threshold as a key tool to create zones of encounter and the non-speculative forward-thinking model of cooperatives to shape a framework within which a multi-storey building with integrated nature, a variety of households and common spaces will flourish. Towards that direction, literature research on the topics, typo-morphological analyses of relevant precedents as well as in-situ observations are employed as methodological tools to conclude in spatial and theoretical aspects contributing to an ecology of inclusion in the design.

Utilizing and revisiting the pre-existing type of the hofje, inflected with the threshold character of commons creation and the pragmatic scenario of devising cooperative tenure generate an evidenced-based dwelling design that is as much of a site-specific architectonic product as a universal proposition to be adopted across contexts.

Key words: Synanthropic, Hofjes, Threshold, Cooperative, Housing, Dwelling, Ecology, Inclusion, Anthropocene, Blijdorp, Walenburghof, Rotterdam





Fig 01 - 'Intérieur dans les Landes, France (lou pachedeuy)'. Oxen were a source of traction, fertilizer, warmth and company. 'Pachedeuy' was a mixture of hay and bran used as forage. (Source: https://commons.wikimedia.org/

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Analysis to Design

SYNANTHROPIC HABITATS

Glossary

Hofjes

hof∙je

1: a partly closed community intended for the needy, usually consisting of a number of houses around a park

2: an enclosed space intended for gardening

Source: nl.wiktionary.org Dictionary, s.v. "hofje," accessed March 28, 2022, https://nl.wiktionary.org/wiki/hofje

LEC

: Limited-equity co-ops, or LECs, are part of a larger universe of housing, known as "resale-restricted housing," in which resale prices are kept low in order to preserve the affordability of the housing over the long term, for multiple generations of owners. The ownership structure removes the housing from the speculative real estate market: it is not a financial investment for making profit

Source: Huron, Amanda. 2018. Carving Out the Commons: Tenant Organizations and Housing Cooperatives in Washington, D.C. Minneapolis: University of Minnesota Press.

Lemma

lem·ma | \ 'le-mə \ plural lemmas or lemmata\ 'le-mə-tə \

: a glossed word or phrase

Source: Merriam-Webster.com Dictionary, s.v. "lemma," accessed March 28, 2022, https://www.merriam-webster.com/dictionary/lemma.

Lexis

lex·is | \ 'lek-səs \ plural lexes\ 'lek- sēz

: 1950s (denoting the wording in a piece of writing): from Greek, literally 'word' (see lexicon).

Source: Oxfordlearnersdictionaries.com Dictionary, s.v. "lexis," accessed March 28, 2022, https://www.oxfordlearnersdictionaries.com/definition/american_english/lexis

Paraphernalia

par·a·pher·na·lia | \ _per-ə-fər-'nāl-yə , _pa-rə-, -fə-'nāl-yə \

1: articles of equipment : FURNISHINGS

2: accessory items : APPURTENANCES

In current use, paraphernalia is typically encountered in its "equipment" sense in such contexts as "arrested for possession of drug paraphernalia."

Source: Merriam-Webster.com Dictionary, s.v. "paraphernalia," accessed March 28, 2022, https://www.merriam-webster.com/dictionary/paraphernalia.

Porosity

: "[...] Porosity is the space of opportunities and improvisation. Through intermingling and interpenetration, the concept of porosity as transitiveness [...] In the city, porosity is always ambiguous and dependant, in its interpretation and projection, on perspectives which confronts systems of values operating in the selection of erasure of the urban palimpsest, in the consideration of the physical, functional, social connectivity, and permeability of the urban realm."

Source: Viganò, Paola. 2018. "Porosity: Why This Figure Is Still Useful." In Porous City: From Metaphor to Urban Agenda, by Sophie Wolfrum, 50-58. Basel: Birkhäuser.

Praxis

prax-is | \ 'prak-səs \ plural praxes\ 'prak-sēz \ **Definition of praxis**

: practical application of a theory

Source: Merriam-Webster.com Dictionary, s.v. "praxis," accessed March 28, 2022, <u>https://www.merriam-webster.com/dic-tionary/praxi</u>

Threshold

: "Threshold spatiality may host and express practices of commoning that are not limited to secluded worlds shared by secluded communities of commoners. Thresholds explicitly symbolize the potentiality of sharing by establishing intermediary areas of crossing, by opening the inside to the outside. As mechanisms which regulate and give meaning to acts of passage, thresholds may become powerful tools in the construction of spaces which escape the normalizing urban ordering of the city of enclaves. [...] Thresholds create the conditions of entrance and exit, prolong, manipulate and give meaning to an act of passage. [...]"

Source: Stavrides, Stavros . 2016. Common Space: The City as Commons, p.56. London: Zed Books.

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PART ONE

INTRODUCTION

PERSONAL STATEMENT

It was March 2020, I was crouched over my books designing my diploma thesis project that was dealing with the formation of a new community at an abandoned settlement based on production processes as a response to the emergence of a new ecology¹, when COVID-19 has come as a bolt from the blue. This submicroscopic agent has not only unnormalized our daily life but has also been embedded in our collective consciousness forced us to adjust our living conditions in ways that we did not anticipate; and for me, it was a grotesque occurrence. At the time, I was so immersed in a project that was revolving around sustainable practices and societal issues that pandemic's outbreak make me realise that during the last 5 years of my architectural education I was unpretentiously reproducing the anthropocentric binary of human (us) and nature (them) without critically guestion it. This ancient dialectic of a mechanized perception of nature has been shaken from this tiny inhalable particle, triggering a scientific discourse around a new interdisciplinary quest on "how will we live together"; posed among others by Hashim Sarkis for the purposes of the Venice Biennale in an effort to transcend all disciplines and open the topic to a large spectrum of confrontations from the multiplicity of species to the climate change and global inequalities.

The aforementioned question has been in my head since the beginning of my studies at TU Delft and with the choice of Advanced Housing Design Studio through its theme "Ecology of Inclusion" I aspire that I can put into test some of my thoughts; but most importantly, to have the opportunity to touch upon issues of social inclusivity, interaction with non-human species and nature's integration to the design. What can bring together people of different cultural, linguistic, religious, educational, ethnic backgrounds? What are the gualities of a space that can possibly invite both human and non-human? What are the benefits of coexistence between strangers and between humans and non-humans? Which are the commons or the "acts of commoning" that bridge the once heterogeneous entities together? The graduation project and the present research plan as the back-

¹ The project explored and problematized the dynamic proximity of the emerged water bodies with nearby settlements as a result of the unprecedented phenomenon of the incessant rainfall in 2019 that affected the everlasting drought-stricken island of Cyprus.

bone of the design aim to creatively and innovatively address this series of queries and to spatially centralised them into an evidence-based architectural proposition.

THE SITE

The setting of the studio is a central location in the northern part of Rotterdam city, midway a green-blue biodiversity corridor that runs along the city starting from the zoo in the east and extending towards the central station to the west. The site is urbanistically formed by the highway lane of Statenweg that links the southern-northern side of the city and the busy road of Walenburgerweg that moves along the east-west axis. These urban transportation armatures are dividing the site into two smaller neighbourhoods falling within Blijdorp and Walenburghof districts. The existence of the vehicular road network in combination with the metropolitan-scale railway station in close proximity are conferring a strong mobility character to the site, albeit are forming linear boundaries which are vitally impactful for the daily life of the residents.

The building stock of the site consists of schools, elderly homes, residential blocks, smallsize industries, and services which as edifices have a significantly smaller footprint in relation to the area that they occupy, thereby leaving vast spaces open without a certain function. The educational facilities outnumber the rest of the buildings, giving on the one hand a predominating school-like identity to the site, and on the other hand, demonstrating that the general liveability of the area is directly dependent on the activity of the schools. The small number of households and the profile of the site's inhabitants are calling for housing densification as well as for social diversity.

Part of the general image of the site is also formed by both the top-view perspective and the eye-level experience, in regards to the apparent lack of trees and the scarcity of green surfaces. Trees are limited to the typical row acupuncture along the streets that are not linked with the wider green areas, and therefore inadequate for acting as cooling mechanisms, as shadow canopies, and as habitats for fauna. The ecological value of the site in terms of environmental sustainability and healthy living is also affected by factors such as the materialization of the buildings, the air quality, the noise pollution, and the usability of the walking routes and public spaces, that in the current state demand for reconsideration.



PROBLÉMATIQUE

Cities, we learn from ecocity studies, could be rebuilt to fit gracefully, non-destructively, even regeneratively into their bioregions. They could become instruments accomplishing two priceless goals: (1) fuller creative evolution of society and the individual, and (2) healthy coevolution and mutual support with nature (**Register 1987 pp. 7–8**)

Problématique: the need of thresholds as "eventful" spaces

The entry of the new millennium has come with a tremendous ascertainment for humanity; that the history of our planet is no longer explicitly subject to the geological time scale but is also inextricably intertwined to the impact of human beings on the planet, to such a drastic extent that can alter the rock strata. The acknowledgment of this activity prompted the scientific community to introduce the current period as the Anthropocene epoch. This epoch, although has not yet been officially declared, had led to the exacerbation of environmental movements, activist groups, ecologically oriented companies as well as to the pursuit of sustainability ethics and eco-friendly solutions covering the whole spectrum of human activity, from the macroscale of urbanization processes to the microscale of domestic practices. Apart from that, tons of ink have been spent to synthesize methods to counteract climate change as the admittedly spearhead of this ecological catastrophe, in an effort to give an answer on how we can live in healthy environments in the future alongside nature. The thorny question which is raising is: how can we regenerate cohabitation milieus (i.e. environments of coexistence) which are not only coping with the climatic phenomena but at the same time are also creating the appropriate circumstances of commoning under which human and non-human can reciprocally coexist?

The port-city Rotterdam encapsulates the aforementioned challenges and spatializes the tensions evoking from the climate crisis as well as from its prevailing identity as a transportation hub, magnetizing people from all over the world. On the one hand, the municipality of Rotterdam has laid down strategies to resist the dynamic climate change¹, while on the other hand, the city is facing an enormous challenge of increased residential and social segregation (Engbersen 2014). Blijdorp, as the given site under investigation, due to its central position in the urban fabric, its proximity to the heavy transport infrastructure, and the existing green corridor of the zoo to the west, provides the fertile ground and holds the potential to set in practice innovative design ideas on how we can

¹ cf. Rotterdam climate-proof adaptation strategy issued by the municipality of Rotterdam

revisit the housing model, reflecting upon both the climatic and social issue. The departure for the quest can not only be confined to the way we can live together with the non-human, but most importantly, it should touch upon what is lurking behind the commons that bring together the different entities.

The site is being characterized by largescale building structures that are disproportional to the nearby urban grain as well as from a clear tetratomy shaped from the vertical and horizontal axes which are cutting it through. One can easily notice that neither the urban rhythm, of the adiacent neighbourhood with the continuous facades of the Dutch row houses, nor the tectonic typology and materiality of the buildings in the neighbouring blocks match with the structures on the site. In line with the above, the site lies between an area of intense mobility to the south and a relatively lower-frequency area to the north while the vast openness of the site to all directions diminishes the chance of threshold spaces as in-between spaces that do not only allow the community life to thrive but also are essential as transitional spaces between the inner (dwelling) and the outer (urban) life (Stavrides, 2016) of Blijdorp's inhabitants. In the same direction, the limited existence of green space in combination with the noise pollution from the train station draws also the non-human species out of the area. It is of paramount importance to problematize both the lack of thresholds and the human-scale enclosed spaces that are crucial for the healthy liveability of the site. Which is the spatial amalgam of the abovementioned problematizations? What is the transitional architectural space that is missing from the context that spatially encompasses these queries? How can the introduction of thresholds and a re-definition of "hofjes" (dutch courtyard) -as the publicly accessible enclosed space, a shared areen place, and a collective infrastructure- allow for the coexistence of human and non-human in Blijdorp today?

HYPOTHESIS

Hypothesis: *inclusive architecture through the rein-* set *terpretation of "hofjes"*

The coupling of the need for an ecologically resilient environment with the imperative need of reducing residential segregation and improve the social cohesion dictates a new typology that will shift the paradigm of Dutch Housing. I argue that this has to be developed on the basis of cooperative housing, injected with the concept of synanthropic habitats, in the sense of harmoniously living with the otherness -implying everything that holds a sense of heterogeneity either between a group of strangers or amongst humans and non-humans. The construction of such a paradiam requires the introduction of areen threshold places where the overlapping quotidian practices among people as part of the human system, and the existence of non-humans can participate in a game of blended cohabitation. I advocate that the common ground of this coexistence can be traced back to the traditional Dutch "hofjes" as places of encouragement of encounters, both a refuge for the species but also for the dwellers belonging in the local community as well as the occasional passengers.

The cooperative concept of housing has an inherent democratic character of ownership acquisition as well as an increased sense of sharing and caring for the common areas (e.g. laundering room, shared kitchen, roof terraces, shared lounges) of the residential complex. The non-speculation basis of such housing models along with the political and economic disposition of its members enable, on the one hand, to build highly diverse affordable environments, and on the other hand to create experimental dwelling typologies. The traits of the cooperative housing in tandem with the introduction of threshold places and the contemporary redefinition of the central courtyard² addresses the overarching theme of the ecology of inclusion by means of meeting the actual needs and diversifying the users³ while simultaneously create in the epicentre of a heavily urbanized environment such as Rotterdam, green oases for the living organisms.

 ² cf. case studiy analysis on page 55, 73 and 91

 3
 The creation of urban commons are inextricably link with the density and heterogeneity of people (Huron 2018)



Fig 03 - The Courtyard of a House in Delft by Pieter de Hooch, 1658, Collection of the National Gallery, London (Source: https://commons.wikimedia.org/)

USER GROUP

Hofjes has historically provided housing to a certain group of people in a specific stage of life, for instance, elderly or women (Wilms Floet 2011) while as a type per se is inherently promoting the community living under a protected state of collectively inhabiting around a green space. Hence, the user group that I envision to accommodate my proposal regards the single parent with a child or children in an effort to offer, on the one hand, the circumstances of productive interaction and safe upbringing of the young members while on the other hand integrating the parents into a communal life with their peers. Apart from that, this user group choice complements the range of target groups (elderly, women, sole dwellers, families, students) that are being accommodated in other parts of the site.



Fig 04 - Research Diagram_Structuring the Thesis on the W's and How Basis

RESEARCH FRAMEWORK

Methods and Methodology:

I. <u>In situ observations</u> : studio and idvidual work

The studio site visit and the subsequent division of the students into seven thematic aspects for the area's urban analysis in order to read the site under a variety of research lenses has been the primary yet rudimentary method. The treeweek long analysis has revealed insightful facts for the Blijdorp on both the social and the ecological level that are instrumental for the formation of an urban strategy and a programme for individual design. Distilling the salient conclusions of each of the categories/ perspectives with an emphasis on the scopes of this research proposal the main issues that emerged are epigrammatically concerning the following: poor quality of public space, a car-oriented neighbourhood, the scarcity of green spaces, the isolation from the existing biodiversity corridor, the unhealthfulness of the adjacent rail tracks (air and noise pollution), the prevailing campus-like character of the area as well as the lack of safe transitional spaces that lead to the entire cut off condition with the surroundings.

All of the above has shed light on the innate identity of the interrogated area and has been the essential stepstone to envisioned possible futures for Blijdorp and the metropolis of Rotterdam. This method will be an ongoing process taking place throughout the entire graduation year in response to any new queries that might arouse along the way.

Synopsis:

Epistemes: Praxeology

II. <u>Precedent Analysis:</u> Courtyard as an essential tool for communal living and an opportunity for species inclusion

The idea of revisiting hofjes has been born from the problématique and the guiding quest of finding an architectural space with such qualities that can encapsulate the triptych of an enclosed human-scale but publicly accessible innerblock space, an opportunistic habitat for other living organisms and at the same time providing a place for interaction and encounter among all the human and non-human actors. Historically hofjes have been "secret courtyards" in communal complexes intended mainly for elderly people or religious women (Cieraad 2017) as a privately defined regime for social security and welfare. Progressively, they have opened up to the rest of the social groups of users hosting a plethora of activities and being an integral part of urban life.

Typologically *hofjes* have been invisible behind a wall (archetype), monumental or a combination

of those two, in disguise as a city palace (Wilms Floet 2019). They have traditionally been a place of memory and a locus of historic referencing still surviving today as *type*⁴ in cities' historic centres. The challenge is how can we revisit this archetypical space in the contemporary context? What are the elements that enable this rather enclosed space to become a place of passage in the sense of threshold? How we can transmit and enrich its architectural qualities in a new housing design? The questions formulated here aspired to be the genesis of the design, and a typological framework for developing a new dwelling type.

Synopsis:

- Epistemes: Typology, Ecology
- Key terms, concepts, theories: hofje, innerblock building type, urban element, archetype, Jean-Nicolas-Louis Durand, Aldo Rossi

⁴ cf. the work and meaning of type from N. L. Durand to Neo-Rationalists

III. <u>Literature Review:</u> Thresholds and Commoning

Thresholds and commoning have been relatively new terms for the metropolitan urbanized context. They are sites open to public use in which, however, rules and forms of use do not depend upon and are not controlled by a prevailing authority (Stavrides 2016). Stavrides in his book Towards the City of Thresholds (2019) unravels new forms of socialization and uses of spaceself-managed and communal-by representing the city as a stage of manifestation of social antagonism and spatial emancipation. The theoretical findings of his work which are intersecting the Lefebvrian and Foucaldian philosophies are critical in subverting the predominant despotism of housing design norms, largely employed in cities like Rotterdam.

In this directive, cooperative housing as the non-commodified collectively governed resource (Huron 2018) provides the spatial paraphernalia for the creation of commons and community -without the one necessarily preceding the other. In this housing models, the rules of use are also having a threshold character, constantly changing while the subjects (commoners/inhabitants) are open to negotiations with the newcomers. The epitome of this theoretical framework is vital to structure the matrix wherein the lexis will eventually lead to the praxis.

Synopsis:

- Epistemes: Praxeology (socio-spatial practices), Ecology
- Key terms, concepts, theories: Threshold, Cooperatives, Commoning, Transitional Spaces, Porosity, Stavros Stavrides, Amanda Huron, Till Boettger, Paola Viganò, George Teyssot, Walter Benjiamin.



Fig 05 - A Dutch Courtyard by Pieter de Hooch, 1658-1650, Mauritshuis, The Hague, Netherlands (Source: <u>https://commons.wikimedia.org/</u>)

PRELIMINARY CONCLUSIONS

Preliminary Conclusions: The multiscalar translation of hofjes in Blidorp today

The hofje due to its robust architectural type comprising of distinct components, and its clear social agenda for housing provision has been able to sustainably survive in the urban fabric since the Middle Ages. Hofies are continuously inhabited as constituent architectural figures in the Dutch cities by adapting to the changing needs of different epochs and users (Wilms Floet 2019). Its conventional representation as the central outdoor space surrounded by a repetitive group of houses has therefore as many variations as the spatial limitations of the respective site or the alterations that had undergone throughout its life. With a closer reading at historical examples of hofjes we can identify that are multiscalar edifices which correspond to the scale of the city as enclosed publicly accessible territories, to the scale of the neighbourhood as collective infrastructures, and the scale of the building as communal green enclaves. What is significantly notable for this typology is that the transitional element of the entrance has not only been the spatial passage (threshold) to the inner court but also a predominant feature

with a semantic essence as it was aiming to commemorate the noble founder that subsidised the development.

Endorsing the principles and analogies that can be found in the historical precedents and through insights from contemporary references and the knowledge of the site's characteristics, the hofje typology can be productively translated into Blijdorp, Rotterdam. Placing such a typology adjacent to the road, three different scenarios of thresholds in response to the multiscalar nature of hofie will emerge: i) the threshold between the building and the urban armature, ii) the threshold of the gates/entrances leading from the public domain to the secured domesticated green enclosure and iii) the smaller scale transitional spaces within the innerblock typology (staircases, loggia, portico) -that are not only functionally necessary but are also spaces of encounter and coexistence between the residents. In this manner, the threshold surpasses the merely theoretical dimension and is being converted into an architecturally inflected element to dialogue both with the surroundings and the internal parts of the building. The manipulation of the dynamic architectural synergies of the

multi-layered threshold spaces, provides among other things, a great opportunity to escape from the conventional image of the rather introverted courtyard of the archetypical hofje. Designing the threshold and putting under the microscope the edge condition, the once solid and impenetrable walls can now be treated as porous surfaces, thereby transforming the central garden into a receptive interface of human and non-human actors. In this logic, the building is an ecology itself that belongs to a constellation of other systems in the vicinity (e.g. urban networks, natural environment, etc) susceptible to a contemporary interpretation where inclusivity both social and ecological are inventively celebrated.

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### PART TWO

# **HOFJES AS TYPE**



## PROEM

The lemma 'hof' in the Dutch dictionaries refers to the housing complexes situated around a courtyard with controlled access, frequently represented from the academic milieus or through the narrations of the Dutch collective memory as a phenomenon which is restrained to the Netherlands extending from the long-standing tradition of the monasteries up to today's large housing projects in the form of the closed residential blocks. This chapter attempts to depart from any a priori designations and established connotations of hofje and revisit them as the Dutch offspring of the global courtyard type that adapts and therefore reforms based on climatic, environmental, cultural and social factors. Through, the historiographic perspective of the evolution of hofie, the identification and analysis of its spatial elements and the resonance of the core idea of courtyard, a greater understanding of the hofje typology and its principle features is achieved. The documentation of its fundamental features allows us to comprehend how this archetype remains an economic, social and environmental sustainable domestic milieu while employing ecological and social norms that are hitherto guintessential for an inclusive design capable to correspond to the

contemporary housing challenges.



- 1. Bethlehemshofje/de Houcksteen 1668 Leiden
- 2. Proveniershof 1707 Haarlem
- 3. Regenten- en Lenghenhofje 1755-1899 Dordrecht
- 4. Sint Salvatorhofje 1625 Leiden
- 5. Van Assendelfthofje 1624 Leiden
- 6. Sint Andrieshofje 1617 Amsterdam
- 7. Hofje van Noblet 1761 Haarlem
- 8. Van Brants Rushofje 1734 Amsterdam
- 9. van Brouchovenhofje 1639 Leiden
- 10. Hofje van Cinq 1701 Gouda



Fig 07 - Hofjes Sizes Across the Dutch Context. (Source: edited by the author. Based on the work of Willemijn Wilms Floet)

### A BRIEF HISTORY OF DUTCH HOFJES

The history of hofjes typology spans from the mid-14th century to the present, and it is inextricably associated with the constant spatiotemporal urbanisation process of the Dutch cities. Hence, the development of the Hofje can be categorised into four main time frames: 1360-1850, 1850-1900, 1900-1990, 1990-present in relation to the societal forces that were in state and sustained this type from the one epoch to the other in respect to the changing needs (Wilms Floet, 2016).

In the first historic period, the hofje was primarily a concession by the urban elite of the city, in compliance with the imperative necessity of housing provision to the vulnerable. This gesture from the high society was not a mere courtesy but rather a mindful move that it was coming along with the representation of a status, the vanity's fulfilment of leaving behind a mark in the urban fabric. Despite the opportunistic logic behind this, the dual social agenda of reputation and philanthropy has proven catalytical for the existence and preservation of hofje typology until now. In fact, the concept of hofje was based on the Christian doctrines of equality, modesty and simplicity materialised by anyone who was profoundly moneyed (Wilms Floet, 2011). The founders of hofjes were drastically diminished by the end of the Golden Age (ca. 1670) as the financial disparity between the upper-class group had enlarged, thereby the construction of hofjes passed to the hands of the incredibly prosperous people who were driven by the Calvinist teachings.

The second time period (1850-1900) had followed the end of the industrial revolution, in an era when the diffuse political modernization and the housing booming were calling for a new type of dwelling. In this time, the once little charity courtyards tuned into 'the speculative hof' (Wilms Floet, 2011) in the sense of commercial housing for the working class people to serve the increased demand for housing in the city.

The subsequent period of 1900-1990 has marked politically by the enforcement of the Dutch Housing Act in 1901, that introduced a completely new regulative mode of construction setting mass housing in the top of the governmental housing agenda (Wilms Floet, 2009). During that time, hofjes were seen as the ideal block typology capable to provide density and collectivity through multi-room dwellings around a central green outer space.

From 1990 onwards, the housing assignment were no longer held by the state, thus paving the way to real estate stakeholders, architects and urban designers to rediscover hof and insert it to the profit-making market. The hof is now either a private property or a cooperation that accommodate people with financial restrains while in some other occasions hofjes promoted as a 'thematic living' concept of the urban oase (Wilms Floet, 2021).

### ANALYSIS OF HOFJES TYPOLOGY

The widespread propagation of hofjes all over the Dutch territory and their nearly six centuries of longevity imply that they are not an emphemeral typology or a formalistic courtyard architecture that has emerged at a certain moment and has just massively reproduced. The dozens of hofjes built in the Netherlands have not reduplicated neither in the exact shape nor the exact size. This repeatedly continuous construction across the country of the hof surpasses the typological boundaries and falls within the architecture of type as defined by 'La Tendenza' architects. The word type represents not so much the image of a thing to be copied, as the idea of an element that must itself serve as a rule for the model (Lavin, 1992). In other words, hofjes could be conceived as urban housing models consisting of distinct elements with minor site-specific adaptations. The first and the most determining element for the general layout and the character of the hofje regards the courtyard. Courtyards vary, from small-scale paved courts to large-scale park-like spaces. In the geometrical centre of the courtyards usually a garden or orchard is placed while in some cases a sundial or water pump is adding to the impression of a bucolic scenery (Wilms Floet, 2009). The houses

-commonly one storey high with an attic- are oriented towards the central green space retaining a physical and visual connection with the courtyard . The number of the dwellings are highly dependant on the financial availability and the plot's practical restrictions. Consequently, there are hofjes with only 4 rooms and some others with more than 60 houses, forming apart from the typical linear row of cottages or the conventional independent block, L-shaped or U-shaped spatial configurations. In the largest of hofjes, a small chapel or a morgue are also part of the green central space. Another characteristic of the historical hof, is the rhythmic repetition of windows, doors, dormers and chimneys which under the pitched roof and in combination with the central courtyard and the cottages are forming an architectonic whole, the proto-hof or a generative type.

The location of the hof type in the city as well as the accessibility issues, are integral parts for the identity of this typology. Generally, hofjes are either hidden or visible visible (Wilms Floet, Coumans, and Stellingwerff 2019). In the former situation, the hof hides in the middle of the urban block or archetypically behind a solid wall or even imitates the facade of the adjacent building to camouflage with its surroundings. In the latter situation, the hofie predominates its immediate environment via a monumental gatehouse or with a broad and direct relationship with the street. Naturally, the transition between the urban street to the inner courtyard is largely subject to the way the entrance has been designed, in order to create the threshold space between the city life and the building's inner life that can regulate the accessibility (Wilms Floet, 2021). The character and multitude of threshold spaces are linked with the limitations of the site and the extroversion of the hofje, covering a vast spectrum from subtle transitions to methodically staged architectural promenades. The separation between the public realm of the outer world (city) with the private domain of hofjes inner life gradience on the basis of the architectonic manipulation of the transitional space, transcend hofie from an isolated building to a tool of the larger urban system.



Fig 08 - A great egret temporarily inhabits the hof ,\_taken on October 06, 2008 © jolingkoos (Source: https://www.flickr.com/)

## COURTYARDS AS SPACE FOR COHABITATION

When referring to the hof typology, there is an immediate almost intuitive connection to the courtyard as the epitome of the design and its numerous qualities as a green outer space for the daily life of the dwellers. In this formula of defining the courtyard and its multifaceted character, the beneficial factors for cohabitation amongst both humans and non-humans is seldomly mentioned. The composition of hofje through the openness of the courtyard and the closeness of the building block gives to the residents an environment that serves individuality via lodging in privately owned rooms, while at the same time provides the opportunity for collective activities and interpersonal relationships through encounters (for example in the common staircase, in the large threshold room at the entrances or in other shares spaces). Hence, the human cohabitation is genuinely accomplished as an intrinsic quality of the type through the articulation of the spaces and circulation without any deliberate design intention or enforcement of interaction. The courtvard as a green space per se is an ecologically valuable refuge for the non-human life, let alone the fact that most of the times is geared with a garden, a resourceful green patch for microscopic or small-scale species. The versatility of the courtyard to simultaneously inhabit the non-humans while ameliorating the living standards for the humans is what bestows the essence of oase in the cityscape, and the place where human and non-humans reciprocally co-exist. The space of the courtyard is escaping the idea of the peaceful retreat in the cityscape, becoming a manifestation of collectivism, a theatrical revelation of the green scenery but foremostly a fertile dwelling unit for the non-humans to settle and thrive radiating the atmosphere of a built incubator for cohabitation.



Fig 09 - Proveniershof's Courtyard\_taken on September 29, 2018 © Limin Huan (Source: https://www.flickr.com/)

#### CASE STUDY ONE

### Proveniershof / Haarlem, 1707



Fig 10 - Proveniershof's Location\_Scale 1:5000

The Proveniershof is one of the most characteristic Hofjes of the Medieval Dutch City built in the early 15th century (1414), in the southern part of Haarlem's city centre. Despite going through a turbulent history of interior alterations and transformations is still surviving in the urban fabric, retaining its residential status while at the same time fulfilling its social agenda of a place where vulnerable groups of people find a secure and healthy environment to live in.

#### Timeline:

Unravelling Proveniershof's rich historiographic thread; the Proveniershof was initially built as a convent/monastery named St. Michaël exclusively for eminent women. Following the Dutch Church Reformation in 1578, the hofje was used for a short period of time by the archers of Sint Joris Doelen as a military drill area whereas in 1681, with city's council instigation, the complex was transformed into a high-society inn, accommodating prominent guests of the city. Subsequently, in 1706 the complex was inhabited by elderly people who were entering the communal living under certain criteria and with a standard rent, having the opportunity to lodge there for the rest of their lives, thus giving to the complex a prevailing residential character to be called from this point on as the "Provenierhuis". The latter use of the complex has led to several alterations, including an addition of 23 dwelling units (between 1707-1709) on three sides of the courtvard with direct access to the central communal green space. Proveniershof has undergone multiple transformations in the next years and still operational until 1866, when the individual units have been combined, hence the number of them has slightly decreased. From the beginning of the 20th century and due to the enforcement of 1901 Housing Act, the dwelling units have been connected to the gas, water and electricity networks while after the Second World War they were rented out as social housing. At present, the Proveniershof is managed by a local housing association which rents out the entire block of 72 dwellings and the four commercial spaces which are facing the Gierstraat (Wilms Floet 2018). The housing association was originally renting out the dwellings with the one-occupant-per-room logic, however, due to the noice factor consequenced of the thin-wall structure, the superimposed rooms as well as sets of four rooms around a staircase are currently renting out as single units intended for





Fig 11 - Ground & 1st Floor Plan (1747)\_Scale 1:500





smaller or larger families.

### Typo-Morphological Description:

The Proveniershof urbanistically is centrally located between Nieuwer Kerksplein and the major commercial artery of Grote Houstraat. occupying the entire urban block except from the northeast corner, where a small triangular plaza is created. The building is emphatically shaped by the rhythm of the wooden doors, pitched roofs, and window frames. An architectonic repetition that does not tire the passenger's eye, but rather intrigues it as the dimensions of the rooms differ and the multiplicity of the historic layers are profoundly outspoken through the brickwork on the exterior façade. The inhomogeneity of the dimensions and measurements of the rooms is counteracted by the construction clarity of the strong symmetrical axes running through the building as well as the large orthogonal courtyard surrounded by the houses. The access to the courtyard is given by a prominent gateway located on the urban square while other secondary entrances and passageways are situated in-between the two rings of buildings.

The interior spatial configuration of the building has altered numerous times throughout its history, to modernize from time to time in order to meet either the newly established legislative criteria for housing or for safety reasons. The latest major transformation regarded added fire safety measures but also the improvement of the usable space, leading to the unification of the kitchen and the living room on the inner ring dwellings, the replacement of the existing staircases as well as the preservation of the historic fireplaces and woodworking. The municipality of Haarlem in collaboration with the current housing association responsible for Provenierhof has lately (2017) proceeded to further renovation works to tackle the moisture problem deriving from the uninsulated facades, repairing the foundations and replacing anew the bathrooms, kitchens, and toilets (Ingenieursbureau List n.d.).









#### Ecology of Inclusion:

The architectural distillate of hofies, in general, is the relationship of the building structure with the open central courtyard. The shape and size of the latter along with other spatial elements (number of housing units, type of entrance) define to a great extent the idiosyncrasy of the hofie and consequently its contribution to the ecology of inclusion. Proveniershof as one of the largest hofjes and a palimpsest of spatial transformations offers in terms of social inclusivity a great possibility to be inhabited by various social groups, from the elderly to small families with children. In parallel, the size of its courtyard in juxtaposition to the entrance opening from the street gives it a park-like atmosphere. The series of tall trees in the centre of the courtyard along with the perimetrical hedge of approximately one meter in height offers the appropriate privacy to the apartments in the immediate vicinity without inhibiting the sunlight. The plantation and the overall green carpet are becoming an idyllic environment for the residents and simultaneously a flora anthology for all kinds of insects and small animals to feed and inhabit



Fig 14 - Key Characteristics of Proveniershof\_Scale 1:2000 (Source: Edited by the author. Based on the work of Willemijn Wilms Floet)



Fig 15 - The Relationship Between the Housing Units, the Entrace and the Communal Garden (Source: <a href="https://korthtielens.nl/en/architecture/spaarndammerschoollocatie/">https://korthtielens.nl/en/architecture/spaarndammerschoollocatie/</a>)



Spaarndammerhart is located in the heart of Spaarndammer neighbourhood in north-western Amsterdam, in an area which is largely known for the unique architectural style of the early twentieth-century Amsterdam school, where art through ornamentation, architecture through brickwork masonry, and nature through green spaces and natural patterns were blended together to form an expressionistic identity that has hitherto been recognized as part of the Dutch architectural legacy. Spaarndammerhart is a recently built housing complex that relies on the design principles and traditions of the Amsterdam school, while simultaneously refers to the archetype of hofje through a large collective courtyard space acting both as the spatial matrix for the design proposal and an incubator for guotidian activities.

#### Typo-morphological Description:

Korthtielens and Marcel Lok architects collaborated together to cope with the spatial

challenge of designing a residential complex in a district with a deep-rooted architectural character; and particularly in a site where have previously been other developments. The architects had skilfully chosen not to merely historicize a century-old style, but rather to synthesize an ode to the richness of Amsterdam School and to Dutch hofje by reinterpreting the design qualities of the past in a modern-day building, resulting in winning the 2021 Zuiderkerk Prize<sup>1</sup>. Major emphasis was given to the urban cohesion and accessibility of the project, the preservation of the existing greenery, the enhancement of biodiversity and the provision of natural vistas to all the apartments. The architects restored the 1926 urban profile of the district by giving space to a road in the middle of the development, as this connection was disrupted by the Spaarndammerschool built there since 1978 under the urban renewal logic. Hence, the building is now flawlessly connected to the neighbourhood

<sup>1</sup> The Zuiderkerk Prize along with the Geurt Brinkgreve Cup are being awarded annually by the City of Amsterdam to the best newly-built construction projects in Amsterdam.







Fig 17 - 3rd Floor Plan\_Scale 1:500



Fig 18 - Longitudinal Section of Spaarndammerhart



(Source: https://korthtielens.nl/en/architecture/spaarndammerschoollocatie/)

as an extension of Krommeniestraat through three spacious gates that lead to a publicly accessible courtyard. The meticulously built masonry, the curvaceous facades, the robustness of the complex as well as the integration of artwork designed by Martijn Sandberg placed within the masonry of the three archways and within the paving stones upon the floor of the courtyard, referencing to the Amsterdam School, and to the interplay of art and architecture.

#### Social and Ecological Inclusion:

The outdoor space which is divided into three different atmospheres: the garden, the courtyard and the terraces holds a tremendous ecological capacity for the design. The garden contains various herbs and creepers, and is geared to provide food resources for the urban wildlife such as songbirds, bats, and insects. In the microscale of the design, eaves and gables have been made on the facades, for small animals to hide and nest. Existing large trees have been preserved and regrouped within the communal courtyard and alongside the playground serving as relaxing spots for the residents of the wider district. In the technical part, the building is environmentally sustaina-

ble adhering to the rainproof policy of the municipality of Amsterdam by collecting water through green roofs and delimiting where possible the pavement of the communal spaces. Photovoltaic panels are installed on the roofs contributing to an energy performance coefficient (EPC) of -0.19 while a shared car system is applied to mediate the number of vehicles used. Apart from the ecological aspect, attention had paid to the diversification of the residential programme which includes social housing, private sector rental apartments, spacious family homes and residential/work homes in an effort to enlarge the pool of various income groups and give the possibility to people with different economic background to access and eventually settle in Spaarndammerhart

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Fig 20 - Ground Floor Plan\_Scale 1:500







Fig 21 - The Clear and Symmetrical Building Construction and Landscape (Source: https://korthtielens.nl/en/architecture/spaarndammerschoollocatie/)

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### **PART THREE**

# THRESHOLD AS INTERFACE



## EPISTEMOLOGIES OF THRESHOLD

The discourse of threshold space is touching upon a multitude of different disciplines, from anthropological studies and sociological practices to the spatial architectural dimensions. The literal usage of the word in the daily perception in the physical world in tandem with its etymological meaning allows to theorize the 'between and betwixt' on every aspect of human life and among other interpretations to acquire also symbolic essence. In the common consciousness, the threshold spaces refer to a mere boundary that separates an inside from an outside, as in the doorsill (Stavrides 2015). What seems to escape our attention is that the act of separation is at the same time an act of connection, thereby giving another layer of reading to the threshold as a transitional space injected with the qualities of the passage.

In the words of anthropologist Victor Turner, the threshold crossings hold the potentiality of change as the people who experience the transition during their stay on the threshold are experiencing *'communitas'*. A spatiotemporal condition that gives the opportunity of a common identity-in-the-making while lingering on threshold spaces. It is the construction of a community that periodically reduces to the common characteristics shared by all humans, a short-lasting occasion of abolishing social differences.

Sociologically, threshold space is a precarious virus-like social space that becomes an active catalyst for reappropriation and social reproduction. The ambiguous boundaries of threshold space permit through comparison and translation (as of the never-ending process of translating from one language to another to find the exact signified with the minimum meaning losings) the act of sharing, by establishing a socially common ground in the intermediary areas of crossing. For sociologists, thresholds space equivalents with a mechanism that construct the common ground, a tool that directs neophytes to the 'other side' (Gennep 1960) where they establish a new identity that can potentially lead to the subversion of dominant social and political taxonomies.

The socio-political and anthropological perspectives on the meaning of thresholds do not

touch upon its pure architectural form, although as an architectonic reference is an underlying machination and instigator for any theoretical formulations. Threshold space in architecture is generally considered as the articulation between spaces; usually, an overlooked leftover in-between area for transitional purposes, lacking a specific function (Boettger 2014). The implications of this naively thinking and design for the architectural threshold is perilously leading to the lost opportunity of shaping the space where strangers inevitably gather for a limited time of a day, and therefore to the missed the potential of negotiation, sharing, and exchanging idiosyncrasies. The nescience of what threshold is and how it performs in the architectonic space is not limited to the building-size spaces, but also extends to a vast inventory of other least known threshold spaces of different scales.

In the following sections, the analogies of the threshold space will be analysed reflecting upon its different scales, while at the last part of this chapter, a series of design tools will be documented based on the work of Till Boettger, in an effort to facilitate the perception of thresholds in architecture, to precisely determine the notion of in-between, and lastly, to inculcate the findings into forthcoming architectural syntheses by equipping architects' design toolkit.

Urban Gallery within a Block of Buildings\_Urban Scale





Intercom as a Threshold Device\_Microscale

Fig 23 - The Different Scales of Threshold Space (Source of the first two diagrams: Boettger, Till. 2014. Threshold Spaces: Transitions in Architecture.)

### THE MULTISCALARITY OF THRESHOLD SPACE

Under the terminology of threshold a remarkable amount of essays and research material can be found, that fall in the fields of urbanism and tectonics, demonstrating profoundly that the range of threshold as a multiscalar element is applicable -apart from the conventional domestic architectural scope- to the macro/micro-scale of the architecture practice. In this section, an endoscope to the notion of threshold in the scales of city, building, and domestic devices is attempted, to shed light to obscure layers that discuss thresholds as a relational inside-outside condition, instead of a typical demarcation element in technical compendia. The centre of focus to examine the dynamic notion of the threshold will be the text by Walter Benjiamin and Asja Lacis on the city of Naples for the urban investigation, the Arch+ Journal edition Schwellenatlas (German for Threshold Atlas) for the microscale, and a number of other research articles and books for exploring the subject in the building-scale perspective.

The notion of the threshold has been established as topos almost a century ago (1925) after the ground-breaking essay by Benjiamin and Lacis who encapsulated the Neapolitan life as a sequence of events happening in the intermediate zone:

"Building and action interpenetrate in the courtyards, arcades, and stairways. In everything, they preserve the scope to become a theatre of new, unforeseen constellations. The stamp of the definitive is avoided. No situation appears intended forever, no figure asserts its "thus and not otherwise" (Benjamin, Lacis 2019).

The concept of thresholds is depicted as a temporal and spatial figure, a medium that "demands that space and opportunity be at any price preserved" (Benjamin, Lacis 2019) without getting a definite and distinct form. Urbanistically, the authors through the courtyards, arcades, and stairways offer a topography of the intermediate zones, an architectural library of stages for collective actions; receptors of a daily phantasmagoria that transforms the prosaic urban spaces into eventful thresholds.

The city spaces stated in the essay on

Naples which contextualise thresholds are all sharing the common denominator of transition, the spatial influx of people in and out of a place that transmits the ambivalent atmosphere of unexpected happenings and encounters to take place. It is, therefore deemed crucial to explore the role of the transitional spaces in the scale of building as it is an integrated part of every single design, either in the form of pathways or entrances/exits. A characteristic example of transitional space in architecture can be traced at the Pantheon in Rome where through the portico a spatial delimited transition space is created to form a processional path towards the inner structure of the temple (Boettger 2014). The successiveness of the transition from the urban piazza to the sacred main room through carefully positioned steps is exemplary denoting the significance of the threshold space. One that intends to access the temple is walking from the outdoor space (in this case Piazza della Rotonda) into a permeable semi-outdoor/indoor zone made by the Corinthian columns before reaching the main room. Hence, the porch situated in-between the urban outdoor space and the building's interior aggregates people in an in-betweenness state manifesting that this traversing point leads you in either of the two directions; in either of the two contradicting inside/outside conditions.

The paradigms of Naples in the urban scale and Pantheon in the building scale are inferring to thresholds as an operational and transitional space, an invitation to cross, or a traversing space for people to encounter. However, threshold or 'Schwelle' in German is a more complicated and compound word that connotes apart from 'zone' and 'transition'; the 'change'. In this manner, the interpretability of the threshold term have revisited (2009) through a publication by ETH in cooperation with Siedle<sup>1</sup> where all sorts of microscale technical devices such as peepholes on doors. body scanners, intercoms, automatic face recognition, windows were studied as a part of the opening and shutting condition, exploring new avenues and approaches to the subject. Through the interrogation of the technical equipment, it became graspable that these devices are surveillant threshold equipment, that can directly integrate into the design and give access and control to spaces without the actual physical experience of the space.

<sup>1</sup> manufacturer of door communication and access control systems

Looking on the other side of the door through the peephole, or digitally undressing a human at an airport's body scanner implies a monitor effect, an interface between inside and outside, that gives free access to a place, albeit simultaneously puts into question the infringement of privacy rights.

## THRESHOLD SPACE DESIGN TOOLS

In examining the threshold in the architectonic space but also to be able to recognize it in its physical form and have the tools to design and analyse it, a universally applicable toolkit of parameters is essential. Under this scope, Till Boettger shapes a framework based on the design principles introduced by Egon Schirmbeck in the mid-1990s, who dissected the architectural design into five different aspects (spatial design, spatial function, spatial definition, spatial structure, spatial sequence) having space at the main focus, in an effort to achieve a comprehendible deconstruction of composite spatial structures. The parameters of Schirmbeck have been slightly modified by Boettger while the sixth one concerning topography has been added. Specifically, the six parameters for analysing the threshold space according to Boettger are: spatial delimitation, spatial sequence, spatial geometry, spatial topography, spatial materiality, and spatial function.

The first aspect of spatial delimitation is exclusively referring to the boundaries of the threshold space, and it is useful to determine the openness or closeness of the space, to discover whether they are elements fostering or inhibiting movement, entry, or exit. It also figures out how the space is perceived volumetrically or even identify symbolic elements that might semiotically guide to the interior. The next level of analytical paraments regards the spatial sequence, in other words, the examination of the characteristics of the pathway and the movement through the threshold space. This parameter reveals if a certain circulation has already been staged, if they are multiple possibilities for movement within the same threshold space, and ultimately if the designers had anticipated the transitional space in the way it is actually inhabited. In the subsequent parameter of spatial geometry, the proportions and analogies of the threshold space are examined to uncover the relationship of the threshold space in relation to its immediate environment and to find out whether is an entity within a bigger structure or is a structural organization at its own. In the same direction, the spatial topography widens the geometrical conclusions to the larger context, inquiring the urban structure and the landscape to determine if the threshold space is a component of a bigger ensemble. In the following tier of interrogation of threshold space, lies the spatial ma-



Fig 24 - Threshold Space Design Tools (Source: Boettger, Till. 2014. Threshold Spaces: Transitions in Architecture.)

teriality. The examination of materiality is inextricably linked with the formation of an atmosphere that makes you feel welcome, but also concerns the technical equipment and built-in components that a building needs, which will largely influence the experience of the threshold space. Lastly, the spatial function highlights the importance of the user and gives insights into the general use of space while is also demonstrating how the furnishing creates space closures, alter and strengthens the threshold space. All of the above parameters are instrumental to distil the spatial qualities of the threshold spaces, but most importantly, they can be employed in the design process in order to form valuable transitional states in a way that the mediation between exteriority and interiority is a well-anchored issue from the beginning in the overall design rather than a logical consequence of leftover in-between space.



Fig 25 - Compactness and Fragmentation of the Building through the Openings on its Facade ©LAN Architecture (Source: https://www.archdaily.com/)
#### CASE STUDY THREE

#### Carré Lumière / LAN Architecture, Bordeuax, 2015

#### Location

36 Rue Robert Schuman, 33130 Bègles, Bordeaux, France

Architect(s): LAN Architecture Client(s) Ataraxia Design Completion 2015 Dimensions (Usable Surface) 27m x 39m, ;1,053 m<sup>2</sup> Number of Dwellings 79 Dwelling Sizes 25m<sup>2</sup> - 130m<sup>2</sup> Amenities

Commercial Units, Public Courtyard, Parking Places



Fig 26 - Carré Lumière's Location\_Scale 1:5000

Carré Lumière is a part of a bigger urban development taking place in Bègles in a site where previously a 'grand ensemble' of flatly buildings were dramatizing the site. The project was made possible due to the open minded governance of the Greens that fostered an innovative development capable to challenge the conventional market-led approach, the affordability and procurement tactics in an endeavour to provide quality and density in a rather restricted in size land. The radicality of the project designed by LAN architects does not only confined to the creation of a territorial articulation between the building and its context, but also to the range of possibilities provided by a single edifice to couple the socialization of collective housing and the individual intimacy with a climatic response through the courtyard design and the spatialization of porosity.

#### Typo-Morphological Description:

The guiding design idea was inspired by Bordeaux's 'échoppes'; one-storey houses built in depth, regularly with a façade of 5-6 meters high, located off a side corridor that adjoins a shared space next to a courtyard. Likewise, the architects typologically have created a flexible structural system with a defined 7-meter depth grid favouring adaptability. Each apartment is conceived as a module which has its open green space which can filled up in the future by the residents if an extra room is needed in case of family growth, or vice versa, an existing framework can be removed on the occasion of the young members of a family left the house. These alteration can be made without obtaining building permits or meeting other legislative requirements as they were already anticipated in the original design. The modules are grouped into three distinct clusters served by an equal amount of circulation cores accessible from the green courtyard at the ground floor. The vertical circulation leads to large planar surfaces projecting into the courtyard space that bifurcated to the dwelling units.

#### Ecology of Inclusion:

The high rate of the building's adaptability due to the prefabricated modules, the standardization of the construction and the rationalization of the floor plan in tandem with the porous façades and the green communal spaces gives a significant degree of ecological and social value to the design. A double skin lightweight enGRADUATION REPORT





Fig 28 - Aggregation models ©LAN Architecture (Source: https://urbannext.net/le-carre-lumiere/)

velope is incorporated in the façade acting on the one hand as a sun protecting element and on the other through a second underlying thicker layer meets the thermal performance requirements of the building. The exposition of the three out four elevations of dwelling unit gives the possibility to exploit the exterior space as a windbreak, a mini-greenhouse or as a cooler device for the dwelling unit. In line with the above, the perforation of the façade blends the inside-outside condition and confers a special character to the design while providing cross ventilation to the apartments as it can be easily open or close in response to temporal day/night or seasonal needs. In spite of the quality of the provided architecture and the relatively large amount of open space given to each apartment, the dwelling units are financially reachable. This is due to the high rate of modularity efficiency employed in the design as well as to the direct relationship between the inhabitant and the seller without the engagement of other mediators in the design process. Carré Lumière has built at a cost of 1000€ per square meter, substantially less than the typical market price showing that a high calibre architecture can be combined with a social and ecological vision without necessarily maximizing the cost, all in the basis of a basic courtyard block design■

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Fig 31 - Impression of the Sliding Panels ©LAN Architecture (Source: https://urbannext.net/le-carre-lumiere/)



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### PART FOUR

# **COOPERATIVES AS NOMOS**



Fig 33 - The System Around Co-op Living (Source: https://www.thefirstvillagegreen.com/advantages-of-co-op-living/)

# INTRODUCTION TO THE COMMONS

The contemporary world is organically dependant on the speculative extraction of economic profit and is organized on the basis of interests that penetrate and influence all the domains of human activity. This capitalocentric norm cast its shadow on the metabolism of the cities, and inevitably affects the housing provision, by enlarging the gap of social segregation and enhancing the income inequalities. Over the course of the last decades, scholars are exploring the notion of commons best understood as constituted by the components of: resource, a community of people who rely on that resource, and a set of institutions devised by that community for regulating that resource; (Kip 2015) to explore ways in resisting to the predatory capitalism that dominates today's cities.

Commons in general as an idea extends back in centuries and it was a similarly globalised practice as it is now. In the English landscape in medieval times, commons were the areas -often the 'waste' spaces- subsisted by the farmers who did not own any land through activities like animal gazing or food collection (Neeson 1993). Half a century ago (1968) the commons have been modernised by Hardin (cf. the tragedy of the commons) and a few years later -in the 1980shave concretely shaped into two contradistinctive streams of scholarship, namely institutionalists and the alterglobalizationists. The institutionalist perspective of the commons approaches the subject under the umbrella of political economy and it is more interested in how the different kinds of common property regimes operate. In institutionalist thinking the commons is bounded both in terms of the physical territory but also in the membership, it has clear community rules and a system for monitoring and sanctioning its members as well as a mechanism to resolve conflict within the community. On the other end, the alterglobalizationists are not so interested in the practical details of the administration of the commons, but are more concerned about the politics on the wider scale, claiming that the resources and goods should be available to everyone. The altreglobalization perspective is deeply entangled with anti-capitalistic movements and the various activistic acts of 'reclaiming the commons', and thus demands to be conceived more as a social process or activity that takes place in the city context rather than a mere 'resource' (Huron 2018). Naturally, both trains of

thought are sharing the principle that people can self-manage the resources they need to survive, however, the critical difference lies in the scale that each of the two trains of thought tends to concentrate. Institutionalists are examining the empirical data drawing from existing case studies, whereas the alterglobalizationists are criticizing the larger structures of power, without paying attention to the everyday commoning.

Despite the fundamental principle idea that the two approaches are sharing, they do intersect little. Huron tries to theorize the two perspectives to further enrich the discourse of commons. by proposing the framework of diverse economies drawing characteristics from each of the perspectives to scrutinize and test the dialectical relationship of commons with the capital. In this combined diverse economic framework, the focus is simultaneously on the everyday life details and the processes of managing the commons as well as on the political engagement with capitalism. The resultant culmination of combining the two aspects can be readily intelligible through the study of limited-equity cooperatives or LECs, as a non-capitalistic economic model that belongs in the larger network of a capitalist real estate market.

### LECs & THE PARADIGM OF ZURICH

The prism of the 'urban' refracts new light on the discussion of commons, uncovering the limited-equity cooperatives as a form of urban commons, an affordable resale-restricted housing that although it belongs to the broader universe of housing is kept away from the speculative real estate market. The limited-equity cooperatives are defined as commons because they fit the principal traits of collective self-organisation and decommodification (Balmer, Tobias 2015). They typically have the form of multi-story buildings, designed in such a way to maximize the space usage, and are populated by people who do not necessarily share a particular background, apart from the fact that they are all renters in the same apartment building. In particular, one to enter a LEC, purchases shares for a low amount, and pays a low monthly payment while in the case of moving out, takes back the initial money of shares. These basic regulations are generically applied as horizontal nomos in all the cooperatives with minimal diversifications on each case to secure a democratic, collective ownership structure that will always set these urban structures on the non-speculation side.

Commoning though limited-equity cooperatives is a pragmatic practice to pursue, and it is practically tangible through the paradigm of Switzerland's largest city, Zürich that holds the vanguard position of a century-old commitment for decommodification. The examples of Kalbreite, Kraftwerk 1 and mehr als wohnen (German for 'more than living') among others are elucidating the possibility of a transferrable cooperative housing model where a variety of different users, with diverse incomes, can cohabit in an apartment building in a two-way relationship with the public realm. The successfulness of these examples is due to the broad range of different household types provided (dwelling typologies for couples, solo-dwellers, nuclear families, etc.), to the multitude of shared spaces offered (laundry room, cafeterias, roof terraces, lounges, etc.) that give the sense that the individual space expands to the collective areas of the building and that the person/commoner belongs to a community; as well as because they work under the regulatory framework of 'Gemeinnützigkeit'<sup>1</sup>. The Zürich cooperative model is remarkably forward-thinking as it privileges the use value of housing over its exchange value, and it is, therefore, capable to grant exemption from

<sup>1</sup> German for the non-profit for the benefit of the public

commodification in simultaneity with the provision of exceptional socio-spatial qualities (Kockelkorn, Schindler 2022).

The retrospective analysis of past case studies and the parallel examination of the existing paradigms located within the city of Zurich and its outskirts in combination with interviewing stakeholders around the cooperatives (including architects and city officials) have prompted the research group of the Master of Advanced Studies in the History and Theory of Architecture (MAS gta) at ETH under the direction of Anne Kockelkorn and Susanne Schindler to conclude to the seven conditions of: an idea of sharing, public opinion, non-speculation, equity, debt, land, zoning, and the competition as instrumental factors for the existence of LECs. These conditions with the noble core principles of self-help, self-governance, and self-responsibility that characterized cooperatives can be formulated as nomos for ensuring longterm reproduction of the model. It has already been a decade since the United Nations Secretary-General Ban Ki-moon had officially recognized that cooperatives are a suitable approach to address sustainably the global housing challenge (cf. message for the international day of cooperatives); all that remains is to take actions and make solid steps towards that. Towards an envisioned world of practicing the commons where people will have collective control over their lives by maintaining a non-commodified space in the heart of punitive real estate markets.

### Graphic Novel

The graphic novel narrates the agonising effort of a woman and her child to find a lodging in the city of Rotterdam, as the economic disparity in tandem with the social segregation that have tremendously impacted the city in the last years, has led to an unprecedented housing crisis which evicted them out from their former homes. The story is divided into three chapters in an expanding timeframe incepting from the current situation up to 45 years later, in order to express and discuss the changes of the building under study as well as to explore the socio-spatial temporalities of the development through the involvement of different actors and the construction of fictional yet pragmatic setups.

The first chapter begins with the residential struggle movement woonopstand (https:// woonopstand.nl/en/) that takes place in Rotterdam, and shows Emma (mum) demonstrating in the crowd, holding a self-made placard demanding affordable housing. As a response to the public outcry, the architect (author) portraying in the second sequence conceptualizes a new dwelling design and negotiates its realisation with the city's officials. The personalisation of this desperate state is illustrated in the following frames where Emma and her daughter (Olivia) are staying overnight in the train station when someone escorted them to the site, where the co-op destined for parents with children is being under construction. The second chapter illustrates the building a few years after its completion and soon after Emma and Olivia have joined the co-op. In the first frames, the caretaker of the co-op (Nora) welcomes Emma to the housing complex and organises a common meeting with the residents to introduce Emma to the community. Subsequently, Nora gives the keys of the apartment to Emma, whilst Olivia has let to play with other children at the intermediate threshold space between her apartment and the large green courtyard.

In the third chapter, the storyline evolves at the time when the first major renovation is taking place (circa 50 years after the building has been inaugurated) depicting Emma who is now a middle-aged woman recalling the time she was a kid, implying that the ownership has been handed over to the next generation. The last frames synopsizes the ecology of inclusion as it derives from the design of the threshold spaces between the residences and the common areas. These imaginaries open new roads for the design exploration, as they seek to establish conditions for human encounter and added ecological value that can be translated into the design project.









GRADUATION REPORT



Fig 34 - The Communal Courtyard of the Complex © Michael Feser (Source: https://divisare.com/projects/326984-zanderroth-architekten-simon-menges-ze05

SYNANTHROPIC HABITATS



BIGyard (aka Zelterstrasse) is an emblematic housing development designed by Zanderroth Architekten in Berlin operated on the Baugruppen (German for 'building group') ownership-based model. The housing development is co-initiated and co-created by the architects and the future users, who were jointly bought the land and co-contracted the building, thereby creating an architectonic solution corresponding to their own needs, while keeping the design quality at the highest level and mitigating as much as possible the total expenditures of the building process. Zelterstasse model is not a cooperative as it based on the individual ownership that implies that the profits on land speculation are privatised, however, is an exemplar project not only for its acts of commoning that take place amongst the community but also for its genuinely spatial response to site's constraints both in the scale of the building mass and in the scale of housing floorplans. The architectural richness of the project, its way of manipulating the shared spaces and the group of residents that accommodates it, place it high in the list for a thorough typo-morphological analysis and under the chapter of cooperatives, as many things can be learnt and drawn from this precedent for the purposes of the graduation design.

#### Typo-morphological Description:

The building was erected in an inauspicious vacant plot in the city of Berlin, that has been undesirable from the real estate behemoths for its oblong shape, its north orientation and due to the fact that is surrounded by 22 meters high walls of the neighbouring buildings. Zanderroth purchased the land in an attractive price in respect to plot's exceptional location and turned the disadvantages into an asset, by arranging the volumes into two strips separated by a big yard in the middle. With this gesture and by keeping the northern strip lower and raising an entire level the southern one, allowed sunlight to diffuse in the all apartments while providing through the courtyard design, single-family home qualities in the urban apartments.





- 1 Entrance
- 2 Living Room
- 3 Kitchen Area
- 4 Terrasse
- 5 Bedroom
- 6 Studio
- 7 Patio
- 8 Roof Terrace



Fig 36 - Townhouse Typology\_Scale 1:200

Analytically, the dwelling units are classified in three main types: i) the townhouses that are double face units on the ground floor, connected both to the courtyard and the street ii) the gardenhouses which are accessible through the courtyard in the back of the plot and the iii) penthouses situated above the gardenhouses and accessed through elevators.

#### **Ecology of Inclusion:**

The variation in the dwelling types in combination with the provision of a large green garden that occupies 1300 m2 of the ground area, are the main components that convert Zeltressasse into a benchmark of dwelling design fostering the ecology of inclusion. The differentiations in the housing type and their placement around a communal garden confers to the design the village-like character of a community that shares -beyond a place to live in-, an outdoor life of increased interaction between some 60 children and 90 adults. The yard is the determining design element for the identity formation of this housing design that despite the fact that is a single architectural entity addresses multiple problematics at once. It is a transitional passage for the residents to access their homes from the city's street, a space for children to spend their time in ephemeral playground installations as well as a place of encounter between all the residents. It provides a scenic ambience through careful flora selection (e.g. Gleditsia triacanthos, Sorbus aucuparia, Syringa, Hydrangea) reacting on the one hand to the global urgency of environmental sensitivity and sustainability integration to the design while on the other hand invites non-human species to refuge. On the neighbourhood scale, it serves as a green lung, a devised purifying mechanism of the city's air pollution while in terms of the building as such, the strategical positioning of the higher trees next to the windows of the units facing the courtyard provides the needed privacy for the indoor life of the residents. In the same manner, the placement of the fair-faced concrete slabs in the garden, delimits the communal space, thereby forming some areas for merely individual use by the residents living in the adjacent apartments. The overall pavement composition shapes an infinite loop ideal for the younger residents to endlessly play around the garden while the acupuncture of the shared spaces by installations (e.g. wooden cocoon, treehouse, etc.) offers the desired age-independent approach which contributes to the unceasing use of the space throughout the day as well as to the reinforcement of the social bonds between the members of the community and their connection to their living space

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Fig 37 - Ground Floor Plan\_Scale 1:500

GRADUATION REPORT





- 1 Kitchen Area
- Bedroom 2
- 3 Living Room4 Balcony
- 5 Storage Room











- 2 Bedroom
- Living Room Kitchen Area 3
- 4
- 5 Patio
- 6 Roof Terrace
- 7 Storage Room





Fig 39 - Penthouse Typology\_Scale 1:200



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### PART FIVE

# **ECOLOGY OF INCLUSION**

# REFLECTION

Aspect 2: the relationship between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS).

My graduation topic and the studio topic are sharing the same guiding query on how one can create with architectonic means domestic milieus where the registers of social and ecological inclusion are catalytical protagonists. The thesis Synanthropic Habitats through the master track of Architecture grasps the opportunity to spatialize the concept of cohabitation (i.e. living with the otherness) by generating a new dwelling paradigm. Particularly, it takes a robust Dutch type (cf. the definition of type in the work of N.L.Durand and 'La Tendenza' architects) of co-living that has traditionally been a shelter for vulnerable groups of people as well as an ecological refuge for non-human actors, and seeks through the research on commons, on thresholds, and on the financial model of cooperative to revisit the relationship with nature and assure social inclusion. The MSc AUBS programme facilitates the elaboration of such a project as it provides on the one hand the fertile ground to guestion deeply-rooted

norms such as the market-driven housing provision while on the other hand gives the prospect to further propel this academic product as an alternative and applicable case study to counteract the acute housing issue in the Netherlands

### **Aspect 1**: the relationship between research and design.

The formulation of this thesis on the thematics of hofjes, thresholds, and cooperatives has in the first place formed a landscape of relevant bibliography and a pool of paradigmatic case studies that can contribute with complementary ways to a design project located within the Dutch territory and specifically in Blidorp. On a second level, the chosen topics bring to the ongoing discussion about the burning issue of housing in the Netherlands and the indispensable need for an ecology of inclusion, the benefits of the cooperative model, and the sustainable principles of hofjes while employing the notion of threshold as a theoretical solidifying tool traversing between different disciplines, capable of creating the circumstances for synanthropic cohabitation.

On the study of hofjes and the respective typo-morphological analyses of historic and contemporary examples, it became clear that the principal compositional elements of this archetype are the central green outdoor space (varying from smaller to bigger courtvards, garden, or park-like spaces), the transitional spaces in the form of passageways, alleys and corridors, and the gateways. Taking these elements one by one and resynthesizing them into a symmetrical enclosed space, following a repetitive logic of placing dwelling units next to each other facing the inner courtyard, a communal living cluster typology is manifestly organized. The simplicity in the spatial layout of this type has enabled it throughout the centuries to achieve major adaptational strides to fit in an ever-evolving urban fabric while retaining a large proportion of outdoor liveable space, as well as to adjust into a hybrid model of accommodating different household configurations (elderly, seniors, small families, students). The transformative power of the type and its dynamic and sustainable architectural directives are what has been a point of departure and a generative design matrix for the synanthropic habitats.

In the same direction, the threshold as a notion has been investigated in different fields in an effort to reflect and touch upon its diverse epistemologies, interrogating its meaning as part of the socio-political and anthropological spheres while at the same time identifying it in its spatial form through studying and analysing literature and a precedent building. Threshold space has been addressed as a multiscalar tool that can be found in the intermediate zones of architecture from the transitional spaces, to interior common spaces as well as to the daily microdevices that are an integral part of our lives, thereby making it both a spatial and conceptual mechanism for every 'between' condition. In the case of synanthropic habitats, threshold spaces through the spatial shape of passages, shared outdoor and indoor spaces, and the publicly accessible courtyard are establishing the spatiotemporal interface where the construction of a common identity and the sense of community between the residents is feasible as per the disguisitions of the examined scientists.

In the discussion of shaping threshold spaces for commoning that encourage the interaction between groups of people within the domestic environment of hofje typology, the model of cooperative comes as a pragmatic practice to regularize and realize the operation of such a scenario. The cooperative framework provides long-term economic sustainability, accessibility, and affordability to housing, therefore inviting people of different social strata and background to join a diverse milieu under a collective ownership structure. The synanthropic habitats project embraces the cooperative philosophy in the form of a multi-story building of diverse households and a great variety of shared spaces, with the cooperative regulative provisions in force for all the residents as nomos. The cooperative tenure in combination with the introduction of threshold regimes between people and spaces are giving a new interpretation to the Dutch hofjes by materializing a dwelling type that comes from the past in response to the modern-day challenges.

# **Aspect 3:** Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry,

The research insights per different topic have been gained by employing three main meth-

odological approaches that complement each other in relation to the scope of the studio but also to the main objectives deriving from the site as such. The first method regarded the episteme of praxeology in the form of in-situ observations. This method has given the initial insights into the contextual conditions operating as a reconnaissance shot to identify the innate characteristics of the location and answer fundamental questions to form the bigger image. In particular, the reading of the site has been divided into seven main analysis filters namely: climate, material cycles, energy, healthy living, political economy, historical context, and energy. Having these different urban and architectural lenses and looking upon the context has enabled the mapping of potentialities, shortcomings, and threads as well as revealed strategies that might employ to either enhance the existing strengths or mitigate the weaknesses. The concluding remarks of this exercise such as the non-exploitation of the nearby high ecological value biodiversity corridor, the great vicinity to the railway, and the large undefined spaces are some of the identified problematics that gave rise to this thesis topic placing hofjes as archetype and thresholds as a conceptual parameter at the epicentre of the design.

The site analysis exercise has been executed in the first weeks of the graduation studio and its diagnosis concerning the typology of the Dutch hofies and threshold tool in tandem with the what-if scenario of cooperatives have brought to the foreground the question of finding the relevant scientific evidence to verify on a first stage the relevance of the chosen topic and thereafter solidifying it and interrelate it with site's specifications. In this effort, an anthology of relevant literature has been found and studied with a clear emphasis on the studies of hofjes, on the field of commons and thresholds and, lastly on the work about cooperatives. For the history and role of hofjes the work of Willemijn Wilms-Floet has been interrogated via her academic papers and dissertations, published articles, and books. In the large accumulation of scientific knowledge about the thresholds and commons creation, the work of Stavrides on the city of Thresholds, the treatise of Walter Benjamin and Asja Lacis for the city of Naples, and the compilation of articles in the Swellenatlas journal as well as Till Boettger's book on Transitions in Architecture have been studied as key readings. Lastly, on the concept of cooperatives the reading of Amanda Huron's work as well as the last Biennale's entry (2021) by Anne Kockelkorn and Susanne Schindler 'cooperative conditions: a Primer on Architecture, Finance and Regulation in Zurich' have been particularly informative and constructive.

In parallel to the literature review, a third method within the framework of the typo-morphological episteme has been employed to achieve a greater understanding of the typological features of Dutch hofies but also to investigate spatial qualities of other built examples in regards to the capacity of threshold and intermediate zone but also in relation to the envisioned user group that inhabits my building. Hence, in delving deeper into the hofies type, one historic example (Proveniershof) and one contemporary (Spaarndammerhart) has chosen for a thorough study with the criteria of learning about the proto-hof and its qualities as well as assessing discrepancies and similarities with the modern-day example to evaluate the degree of its transferability. As the purpose of this thesis is not to reduplicate the historic hofje but to learn about its aspects, the Carré Lumière by LAN architects has been identified as another suitable

precedent for its multiplicity in shared spaces and the expressiveness of threshold character on its orthographic schemes of plan and section, but also in terms of circulation and common facilities provision. The fourth and last edifice that deemed appropriate to analyse regards Zelterstrasse, as from such an example one can retrieve the exemplar plan configuration for hosting small families as well as its spatial response and dialogue with the surroundings. Apart from the individual analytical criteria for each building, they all have been selected to share the common denominator of having a large shared green courtyard, an inward-oriented yet publicly accessible character, and the capability to accommodate a variety of different households.

#### **Aspect 4:** Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results

The aggregated result of the inferences gained by the applied methods, the analysis, and research is synthesized into an evidence-based building design that relies on data and established examples, and devises an economic strategy that assures the long-standing sustainability of the living environment. The innovativeness of Synanthropic Habitats is due to the composition of an established and workable Dutch housing archetype and its spatial adaptation to the contemporary needs with the strive of making it open to the city, preserve its collective character, and making it affordable through implanting the cooperative financial agenda. Synanthropic Habitats suggests that this building albeit a product of the Dutch standards (including the technical and legislative regulations embedded in the design) can be a global dwelling model for urbanized environments to densify cities while retaining a strong economic, environmental, and socially sustainable character. Synanthropic Habitats aspires to contribute and be a central point of the ongoing scientific discussion on 'how will we live together' that became even more imperative after the outbreak of the pandemic, reflecting upon the global urgencies of social inequalities and evolving climate change with the focus on Blijdorp and Netherlands as a case par excellence.

**Aspect 5:** Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research,

#### (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice

An inextricably linked factor of the architectural process and thought is the confrontation with concepts, logics, and theories that may evoke ethical dilemmas. In the case of synanthropic habitats the leading ethical question is the proposition of new development in a site with existing structures with different functions, regardless if the project aspires to offer accommodation to the displaced people or has all the noble intentions for transforming the area into a dynamic neighbourhood. The addition of an entity in proximity to others in place is always creating new tensions that are unpredictable. What affirms the successfulness of such a project is at stake, and depends as much on the social aspect as on the wider strategic level on what you can sacrifice in respect to what you earn

# DESIGN BRIEF

The site through the urban analysis investigation has been diagnosed with a series of problématiques, that are related both to the regional scale of Blijdord and to urban scale of Rotterdam while simultaneously are reflecting global scale urgencies. Analytically, through the lenses of Material Use, Energy, Climate, Healthy Living, Political Economy, Urban Typology, Historical and Societal Context; insights like the non-existence of threshold space, the limited and scattered plantation, the heavily contaminated environment (air and noise) and lack of public space or spaces for collective activities have been gained, forming along with other in-situ observations an amalgam of challenges to be addressed.

Synanthropic Habitats builds on the triptych of the pre-existing robust type of hofje, the theoretical notion of threshold and the financial model of cooperatives, and aims to drastically tackle the aforementioned issues by proposing an inner-block dwelling typology with a green large publicly accessible space in the middle. On the one hand, attempts to counter-act to the surrounding noise pollution by creating an enclosed sustained built entity, while on other hand is open to the neighbourhood and the city, giving space and channel the public flows into the building. In parallel, invites the non-human actors to co-habit in a green lung that is an extension of the existing biodiversity corridor which runs through the city of Rotterdam. The intense plantation on the ground floor combined with the smaller green pockets on the upper floors does not only maximize the green surfaces but also contribute through built-in greywater infrastructures to Rotterdam's climate proof adaptation strategy and at the same time nurture an ecological ethos to the residents.

The building is strategically situated in Walenburghof district in an intermediate condition in-between the purely urbanized context of northern Rotterdam and the proposed artificial landscape on the southern part, in direct dialogue with the urban armature of Statenweg on the west and with the open spacious courtyard that is shaped by the surrounding buildings on the east. The location confers a pivotal role to the building prompting it to act in different scales and situations as a multi-scalar threshold space. The building in relation to the general masterplan retains a synergistic role by bringing in the nature, defining clear pedestrian pathways for the proposed neighbourhood, preventing noise to reach the large open green space through the compactness of the façade, and hosts a plethora of public-use facilities that complement the building programme of the wider district. The project is a part of a general orchestrated design logic that celebrates social and ecological inclusion.

#### **Collective Spaces:**

(excl. service facilities, storage spaces, in-between green shared spaces on each floor etc.)

- Commercial Spaces (Ground Floor)
- Bicycle Parking (Ground Floor)
- Mail Room (Ground Floor)

- Courtyard geared with gardens, urban furniture, playground (Ground Floor)

- Cafeteria/Bar (3rd Floor)
- Study Room (5th Floor

GRADUATION REPORT
## PART SIX

**DESIGN PROCESS** 

## GRADUATION REPORT



## SYNANTHROPIC HABITATS

























Fig 47 - Assessment of the Spatial Accessibility of the Site through the Space Syntax Tool



Fig 48 - Co-relation Diagram. From the Urban Analysis Take-Aways to the Design



Fig 49 - Superimposition Drawing of Proveniershof on the site (part of the typo-morphological exersice to see among other things the analogies of spaces (courtyard, units, etc.), the relationship with the surroundings and the circulation.





Fig 50 - Superimposition Drawing of Spaarndammerhant on the site (part of the type-morphological exercise to see among other things the analogies of spaces (courtyard, units, etc.), the relationship with the surroundings and circulation.





Fig 51 - Superimposition Drawing of Carré Lumière on the site (part of the typo-morphological exersice to see among other things the analogies of spaces (courtyard, units, etc.), the relationship with the surroundings and the circulation.





Fig 52 - Superimposition Drawing of Zelterstrasse on the site (part of the type morphological exercise to see among other things the analogies of spaces (courtyard, units, letc.); the relationship with the surroundings and the circulation





Fig 53 - Mix and Match (typology transfer) the floor plans of the analysed case studies to invent a new hybrid plan in order to kickstart the design





Fig 54 - The result of the typology transfer exercise. A 3D model of the hybrid floorplan that combines the spatial layout of the examined precedents and their qualities, suggesting a holistic approach for intervening in Blijdorp.





Fig 55 - Volumetric Variations of the Type as Porous Entity





Fig 56 - Study Models





## SYNANTHROPIC HABITATS










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Fig 61 - Urban Sections (Source: 'Species' Group Work)









Fig 62 - Masterplan Sun Analysis (Source: 'Species' Group Work)





Buildings

Fig 63 - Masterplan Explanatory Diagrams\_Access to the Buildings (Source: 'Species' Group Work)





◑





Fig 65 - Masterplan Explanatory Diagrams\_Connecting the Square (Source: 'Species' Group Work)



Buildings
 Artificial Slope
 Monument - Wolfert College





Fig 67 - Masterplan Explanatory Diagrams\_Pedestrian Circulation (Source: 'Species' Group Work)





◑



Fig 69 - Design Principle\_Courtyard Typology





Fig 71 - Design Principle\_Sunlight Maximization





Fig 73 - Design Principle\_Typologies Diversification





Fig 75 - Orientation Analysis







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Fig 80 - Location of the Building in relation to the overall Masterplan









CourtyardVertical CirculationHorizontal Circulation

Fig 82 - Circulation Diagram



Shared Green SpacesRainwater PipesShafts



Shared Green Spaces

Fig 84 - Green Concept



- Vertican and Horizontal Circulation
  Green Shared Spaces
  Green Public Courtyard
  Common Rooms

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Fig 88 - Impression\_Passing Through the Threshold from Statenweg














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Fig 92 - Interrelation Between Dwelling Units and Shared Spaces















Fig 95 - Longitudinal Section BB"

SYNANTHROPIC HABITATS







- Dwelling Unit
  Outdoor Space
  Entrance Foyer
  Main Courtyard
- 5 Storage Space



Fig 96 - Tranverse Section AA"





Fig 97 - North Elevation



+5.40 m SL\_1st floor

<u>+1.50 m</u>



Fig 98 - South Elevation





Fig 99 - East Elevation





Fig 100 - West Elevation

\_ \_ \_ <del>\_ +29.90</del> m



GRADUATION REPORT



Fig 101 - Outer Facade Fragment











Fig 102 - Inner Facade Fragment\_i







Fig 103 - Inner Facade Fragment\_ii





Fig 104 - Facade Fragment with Vertical and Horizontal Sections





- 1 PV Panel
- 2 Selected Vegetation3 Substrate
- 4 Layer with Gravel Infill
- 5 Root-Resistant Waterproofing
- 6 Screed
- 7 Railing Mechanism
- 8 Fastening
- 9 CLT Slab
- 10 Schüco Door System
- 11 Sun Protection Movable
- Corrugated Aluminium Panels

1 I. Т l 0.4m 0 0.1 0.2

Fig 106 - Roof Detail












Fig 109 - Dwelling Typology Floor Plan\_Module I-Variation I





Fig 110 - Impression\_Gallery Space Adjacent to Shared Space















I



T



Fig 114 - Impression\_Interior Space and Shared In-between Space

















- 1 Vapour Barrier
- 2 Edge Rubber Stripe
- 3 Foam Mat/ Acoustic Foil4 Trickle Protection
- 5 Fastening
- 6 Elastic Hanger
- 7 Bonded Vapour-Tight
- 8 Elastic Joint
- 9 Schüco Door System
- 10 PVC Pipes/Grey-Water Installation
- 11 Ceiling Board
- 12 Sub-Floor
- 13 Screed
- Т І 0.2 I Т 0 0.1 0.4m

Fig 117 - Indoor-Outdoor Connection Detail



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Fig 120 - Impression\_Shared Space with Furniture





- 1 Vapour Barrier
- 2 Selected Vegetation
- 3 Substrate
- 4 Inspection Chamber5 Layer with Gravel Infill
- 6 Protection Layer
- 7 Root-Resistant Waterproofing
- 8 Water Reservoir and Drainage
- | 0 I І 0.2 l 0.4m 0.1

Fig 121 - Greenery and Planted Pots Detail





Fig 122 - Sun Heat on South Facing Open Spaces





Fig 124 - Typical Load-Bearing Structure





Corrugated Aluminium Panels
Corrugated Prefab Concrete Panels
Concrete
CLT Structure






lS





1 Small-size green spaces between the apartments are equipped with a purifying graywater system. They also increase biodiversity with a variety of different plants

2 Sliding Panels on the facade are providing the needed protection from the winds and the noise pollution and can be closed or opened depending on the needs of the users

**3** The green layer of grass is placed on all the roofs to maximize the green surface and collect rainwater

4 On the highest part of the building, photovoltaic panels are installed facing south-eastern to absorb the solar energy and generate electricity independent of the national grid 5 Underfloor heating is installed in the dwelling units to provide the necessary thermal comfort to the residents.

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07

06

6 Water tank is hidden below the courtyard <sup>5</sup> level where the rainwater is collected and reutilize for watering the plants

7 Patches of green surfaces on the courtyard create a pleasant atmosphere by reducing heating

8 Ventilation escapes through the voids of the building, reducing wind loads on the structure.







Fig 129 - Two-Point Perspective Section





#### SYNANTHROPIC HABITATS



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# PART SEVEN

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| II-Variation I         Fig 112 - Climate Strategy       226-227         Fig 113 - Dwelling Typology Floor Plan_Module       228-229         II-Variation II       228-229         II-Variation II       230-231         In-between Space       232-233         Fig 115 - Impression_Interior Space of Module II       232-233         Fig 116 - Impression_Interior Space of Module III       234-235         Fig 117 - Indoor-Outdoor Connection Detail       236-237         Fig 118 - Contruction Visualisation of Indoor-Outdoor       238-239         Connection Detail       236-237         Fig 119 - Impression_Shared Space with Greenery       240-241         Fig 120 - Impression_Shared Space with Greenery       240-241         Fig 121 - Greenery and Planted Pots Detail       242-243         Fig 122 - Sun Heat on South Facing Open Spaces       246         Fig 123 - Sun Heat on North Facing Open Spaces       247         Fig 123 - Sun Heat on North Facing Open Spaces       247         Fig 124 - Typical Load-Bearing Structure       248-249         Fig 125 - Exploded Axonometric of the Construction       250-251         Process       250-251                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | • | H Variation                                           |                    |
| <ul> <li>Fig 112 - Climate Strategy</li> <li>Fig 113 - Dwelling Typology Floor Plan_Module</li> <li>Fig 113 - Dwelling Typology Floor Plan_Module</li> <li>Fig 114 - Impression_Interior Space and Shared</li> <li>Fig 115 - Impression_Interior Space of Module II</li> <li>Fig 115 - Impression_Interior Space of Module III</li> <li>Explored a strategy</li> <li>Fig 117 - Indoor-Outdoor Connection Detail</li> <li>Fig 118 - Contruction Visualisation of Indoor-Outdoor</li> <li>Connection Detail</li> <li>Fig 119 - Impression_Shared Space with Greenery</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 122 - Sun Heat on South Facing Open Spaces</li> <li>Fig 123 - Sun Heat on North Facing Open Spaces</li> <li>Fig 124 - Typical Load-Bearing Structure</li> <li>Process</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   | II-variation I                                        | 226.227            |
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| II-Variation II         Fig 114 - Impression_Interior Space and Shared         In-between Space         Fig 115 - Impression_Interior Space of Module II         116 - Impression_Interior Space of Module II         117 - Indoor-Outdoor Connection Detail         118 - Contruction Visualisation of Indoor-Outdoor         119 - Impression_Shared Space with Greenery         119 - Impression_Shared Space with Greenery         119 - Impression_Shared Space with Furniture         119 - Impression_Shared Space with Furniture         119 - Impression_Shared Space with Greenery         119 - Impression_Shared Space with Furniture         119 - Impression_Shared Space with Greenery         119 - Impression_Shared Space with Greenery         119 - Impression_Shared Space with Greenery         110 - Impression_Shared Space with Greenery         110 - Impression_Shared Space with Furniture         110 - Impression_Shared Space with Greenery         110 - Impressine Spac                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | • | Fig 113 - Dwelling Typology Floor Plan_Module         |                    |
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| <ul> <li>Fig 115 - Impression_Interior Space of Module II</li> <li>232-233</li> <li>Fig 116 - Impression_Interior Space of Module III</li> <li>234-235</li> <li>Fig 117 - Indoor-Outdoor Connection Detail</li> <li>236-237</li> <li>Fig 118 - Contruction Visualisation of Indoor-Outdoor</li> <li>Connection Detail</li> <li>Fig 119 - Impression_Shared Space with Greenery</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 121 - Greenery and Planted Pots Detail</li> <li>Fig 122 - Sun Heat on South Facing Open Spaces</li> <li>Fig 123 - Sun Heat on North Facing Open Spaces</li> <li>Fig 124 - Typical Load-Bearing Structure</li> <li>Process</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   | In-between Space                                      |                    |
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| <ul> <li>Fig 117 - Indoor-Outdoor Connection Detail</li> <li>Contruction Visualisation of Indoor-Outdoor</li> <li>Connection Detail</li> <li>Fig 119 - Impression_Shared Space with Greenery</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 121 - Greenery and Planted Pots Detail</li> <li>Fig 122 - Sun Heat on South Facing Open Spaces</li> <li>Fig 123 - Sun Heat on North Facing Open Spaces</li> <li>Fig 124 - Typical Load-Bearing Structure</li> <li>Fig 125 - Exploded Axonometric of the Construction</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | • | Fig 116 - Impression_Interior Space of Module III     |                    |
| <ul> <li>Fig 118 - Contruction Visualisation of Indoor-Outdoor</li> <li>Connection Detail</li> <li>Fig 119 - Impression_Shared Space with Greenery</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 121 - Greenery and Planted Pots Detail</li> <li>Fig 122 - Sun Heat on South Facing Open Spaces</li> <li>Fig 123 - Sun Heat on North Facing Open Spaces</li> <li>Fig 124 - Typical Load-Bearing Structure</li> <li>Fig 125 - Exploded Axonometric of the Construction</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | • | Fig 117 - Indoor-Outdoor Connection Detail            |                    |
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| <ul> <li>Fig 119 - Impression_Shared Space with Greenery</li> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 121 - Greenery and Planted Pots Detail</li> <li>Fig 122 - Sun Heat on South Facing Open Spaces</li> <li>Fig 123 - Sun Heat on North Facing Open Spaces</li> <li>Fig 124 - Typical Load-Bearing Structure</li> <li>Fig 125 - Exploded Axonometric of the Construction</li> <li>Process</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   | Connection Detail                                     |                    |
| <ul> <li>Fig 120 - Impression_Shared Space with Furniture</li> <li>Fig 121 - Greenery and Planted Pots Detail</li> <li>Fig 122 - Sun Heat on South Facing Open Spaces</li> <li>Fig 123 - Sun Heat on North Facing Open Spaces</li> <li>Fig 124 - Typical Load-Bearing Structure</li> <li>Fig 125 - Exploded Axonometric of the Construction</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | • | Fig 119 - Impression_Shared Space with Greenery       |                    |
| <ul> <li>Fig 121 - Greenery and Planted Pots Detail</li> <li>Fig 122 - Sun Heat on South Facing Open Spaces</li> <li>Fig 123 - Sun Heat on North Facing Open Spaces</li> <li>Fig 124 - Typical Load-Bearing Structure</li> <li>Fig 125 - Exploded Axonometric of the Construction</li> <li>Process</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | • | Fig 120 - Impression Shared Space with Furniture      | 242-243            |
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| Fig 123 - Sun Heat on North Facing Open Spaces     Fig 124 - Typical Load-Bearing Structure     Fig 125 - Exploded Axonometric of the Construction     Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | • | Fig 122 - Sun Heat on South Facing Open Spaces        | 246                |
| Fig 124 - Typical Load-Bearing Structure     Fig 125 - Exploded Axonometric of the Construction     Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | • | Fig 123 - Sun Heat on North Facing Open Spaces        | 240                |
| Fig 125 - Exploded Axonometric of the Construction     Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   | Fig 124 - Typical Load-Bearing Structure              | 248-249            |
| Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   | Fig 125 - Evologed Avonometric of the Construction    | 240-245<br>2E0 2E1 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   | Process                                               |                    |

| • | Fig 126 - Materials Management                  |  |
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| • | Fig 127 - Acoustics of the Main Materials       |  |
| • | Fig 128 - Sustainability Strategy               |  |
| • | Fig 129 - Two-Point Perspective Section         |  |
| • | Fig 130 - Impression_Looking Outside the Window |  |
|   |                                                 |  |

{Unless otherwise indicated, drawings, illustrations, diagrams and images included in this thesis have been created by the author} SYNANTHROPIC HABITATS

GRADUATION REPORT

Appendix II: Graduation Plan

# **Graduation** Plan

Master of Science Architecture, Urbanism & Building Sciences

# **Graduation Plan: All tracks**

Submit your Graduation Plan to the Board of Examiners (<u>Examencommissie</u><u>BK@tudelft.nl</u>), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

| Personal information |                 |  |
|----------------------|-----------------|--|
| Name                 | Michalis Psaras |  |
| Student number       | 5359171         |  |

| Studio                  |                                                               |                                   |  |
|-------------------------|---------------------------------------------------------------|-----------------------------------|--|
| Name / Theme            | AR3AD100 Advanced Housing Design/ Ecology of                  |                                   |  |
|                         | Inclusion                                                     |                                   |  |
| Main mentor             | Ir. Olv Klijn                                                 | Architecture Mentor               |  |
|                         | Dr. Anne Kockelkorn                                           | Research Mentor                   |  |
| Second mentor           | Ir. Ferry Adema                                               | Building Engineering Mentor       |  |
|                         | Dr. Clarine J. van Oel                                        | External Examiner                 |  |
| Argumentation of choice | -To grasp the opportunity touching upon issues of social      |                                   |  |
| of the studio           | inclusivity, interaction with non-human species and           |                                   |  |
|                         | nature's integration in the design                            |                                   |  |
|                         | -To critically question the                                   | e anthropocentric binary of human |  |
|                         | (us) and nature (them)                                        |                                   |  |
|                         | -To contribute to the interdisciplinary quest on 'how will we |                                   |  |
|                         | live together"                                                |                                   |  |
|                         | -To learn from the long tradition of the Netherlands in       |                                   |  |
|                         | housing and have the chance to revisit archetypes in a        |                                   |  |
|                         | contemporary manner                                           |                                   |  |

| Graduation project      |                                                                                                                                                                                                                                                                                                                                    |  |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Title of the graduation | Synanthropic* Habitats: 'Hofjes' as Thresholds for Diverse                                                                                                                                                                                                                                                                         |  |
| project                 | Human and Non-Human Environments                                                                                                                                                                                                                                                                                                   |  |
|                         | *sin-an-' thräp-ik: : on the basis of Greek synanthröpeúesthai,<br>synanthröpízein "to live with others"                                                                                                                                                                                                                           |  |
| Goal                    |                                                                                                                                                                                                                                                                                                                                    |  |
| Location:               | Blijdorp/Walenburghof, Rotterdam                                                                                                                                                                                                                                                                                                   |  |
| The posed problem,      | The site under investigation is characterized by:                                                                                                                                                                                                                                                                                  |  |
|                         | -the large undefined spaces<br>-a high traffic lane that dichotomizes the site into two<br>smaller islands<br>-the noise pollution of the nearby railway<br>-the limited and scattered plantation as well as<br>-large-scale buildings that do not comply with neither the<br>tectonic typology and materiality of the neighboring |  |

|                                          | buildings nor with the general urban rhythm of the<br>adjacent neighborhood with the row houses<br>In tandem with the wider urgencies of:<br>-the climate change as the spearhead of the<br>Anthropocene' era ecological catastrophe<br>-Rotterdam's efforts for a climate-proof adaptation                                                                                                                                                                                                                                                                      |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | strategy<br>-Dutch imperative need of housing provision and density<br>-Rotterdam's Social Degradation<br>-the necessity for affordable and sustainable housing                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                          | form an amalgam of problems that constitute the bigger<br>problématique of the need of thresholds as 'eventful'<br>spaces of encounter on the basis of a sustainable<br>(socially, economically, environmentally) and ecological<br>inclusive hofje typology.                                                                                                                                                                                                                                                                                                    |
| research question and                    | (Main) RQ: How can the introduction of thresholds and a re-definition of 'hofjes" (Dutch courtyard) -as the publicly accessible enclosed space, a shared green place, and a collective infrastructure- allow for the coexistence of human and non-human in Blijdorp today?                                                                                                                                                                                                                                                                                       |
|                                          | <ul> <li>(Selected) sub-questions:</li> <li>-How can the archetypical space of hofje be revisited within the contemporary context?</li> <li>-What are the inherent qualities of hofjes that make them a continuously inhabited housing typology since the Middle Ages?</li> <li>-Which are the epistemologies of threshold and how can be implemented into an architectural design to establish the intermediate zone of encounter?</li> <li>-What is the role of the courtyard in the cohabitation game, but also in the quotidian human activities?</li> </ul> |
| design assignment in which these result. | Ecological and Social Inclusive Housing Design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

The coupling of the need for an ecologically resilient environment with the imperative need of reducing residential segregation and improve the social cohesion dictates a new typology that will shift the paradigm of Dutch Housing. I argue that this has to be developed on the basis of cooperative housing, injected with the concept of *synanthropic habitats,* in the sense of harmoniously living with the otherness - implying everything that holds a sense of heterogeneity either between a group of strangers or amongst humans and non-humans. The construction of such a paradigm requires the introduction of green threshold spaces where the overlapping quotidian practices among people as part of the human system, and the existence of non-

humans can participate in a game of blended cohabitation. I advocate that the common ground of this coexistence can be traced back to the traditional Dutch 'hofjes' as places of encouragement of encounters, but also as refuges for both species and the dwellers belonging to the local community. The ultimate goal is not to reduplicate the historic hofje but to develop a new dwelling type having the spatial and social key-aspects of the archetypical space as principle points for an innovative synthesis.

# Process Method description

I. In situ observations (Praxeology) – Group & Individual Work

The studio site visit and the subsequent division of the students into seven thematic aspects for the area's urban analysis, in order to read the site under a variety of research lenses, has been the primary yet rudimentary method. The tree-week long analysis has revealed insightful facts for the Blijdorp on both the social and the ecological level that are instrumental for the formation of an urban strategy and a programme for individual design. Distilling the salient conclusions of each of the categories/ perspectives with an emphasis on the scopes of this research proposal the main issues that emerged are epigrammatically concerning the following: poor guality of public space, a car-oriented neighborhood, the scarcity of green spaces, the isolation from the existing biodiversity corridor, the unhealthfulness of the adjacent rail tracks (air and noise pollution), the prevailing campus-like character of the area as well as the lack of safe transitional spaces that lead to the entire cut off condition with the surroundings. All of the above has shed light on the innate identity of the interrogated area and has been the essential stepstone to envisioned possible futures for Blijdorp and the metropolis of Rotterdam. This method will be an ongoing process taking place throughout the entire graduation year in response to any new queries that might arouse along the way.

# II. Precedent Analysis (Typology/Morphology)

The idea of revisiting hofjes has been born from the problématique and the guiding quest of finding an architectural space with such qualities that can encapsulate the triptych of an enclosed human-scale but publicly accessible inner block space, an opportunistic habitat for other living organisms and a place for interaction and encounter among all the human and non-human actors. In order to delve deeper into the hofje type but also to the notions of threshold and coexistence through the cooperative model a number of relevant case studies will be analyzed. The typomorphological analysis aspires to: (i) explore the reasons behind the sustainable longevity of hofjes type through the examination of historic and contemporary case studies, (ii) to discover the beneficial ambivalence of establishing the intermediate zone of threshold and to (iii) learn the opportunities for affordability and inclusivity derived from the cooperative's financial model. The intersection of those findings and the complementarities between them will provide a solid framework and design toolkit for the architectural synthesis.

III. Literature Research on Thresholds and Commoning

Thresholds and commoning have been relatively new terms for the metropolitan urbanized context. Stavrides in his book Towards the City of Thresholds (2019) unravels new forms of socialization and uses of space—self-managed and communal—by representing the city as a stage of manifestation of social antagonism and spatial emancipation. The theoretical findings of his work which are intersecting the Lefebvrian and Foucaldian philosophies are critical in subverting the predominant despotism of housing design norms, largely employed in cities like Rotterdam. In this directive, cooperative housing as the non-commodified collectively governed resource (Huron 2018) provides the spatial paraphernalia for the creation of commons and community -without the one necessarily preceding the other. In this housing models, the rules of use are also having a threshold character, constantly changing while the subjects (commoners/inhabitants) are open to negotiations with the newcomers. The epitome of this theoretical framework is vital to structure the matrix wherein the lexis will eventually lead to the praxis.

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# Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)? 2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

- 1. My graduation topic and the studio topic are sharing the same guiding gueries on how one can create/regenerate with architectonic means domestic environments where the registers of social and ecological inclusion are catalytical protagonists instead of superficially incorporated elements into the design. My topic falls under the wider scope of the studio for *an ecology of* inclusion by giving a certain dimension to it both in terms of the societal issues and ecological concerns, while profoundly retaining a spatial character. Particularly, it takes a robust Dutch type (cf. the definition of type in the work of N.L.Durand and 'La Tendenza' architects) of co-living that has traditionally been a shelter for vulnerable group of people as well as an ecological refuge for non-human actors, and seeks through the research on commons, on thresholds, and on the financial model of cooperative to revisit the relationship with nature and assure social inclusion while addressing the housing issue that afflict the city of Rotterdam. This research would not be feasible outside the MSc AUBS, and the specialization of Architecture as it was the clear pathway towards a fertile ground of guestioning deeply rooted perceptions while also be the constructive environment where you gain all the necessary practical tools to concretely address contemporary challenges.
- 2. My graduation topic aspires to contribute to the wider scientific discourse on 'how will we live together' posed amongst others by the prof. Hashim Sarkis for the purposes of the Venice Biennale and became even more imperative after the pandemic outbreak. This discourse surpasses the field of Architecture, opening new avenues in the intersection of other disciplines and reflects to the ancient human endeavor to take a position in relation to nature as well as to the disparities between the various social strata. In line with that, *synanthropic habitats* design attempts to encapsulate the tensions of the

evolving climate change and the increasing social inequalities by providing a synthetical proposition that holistically answers to the site-specific problématiques and the global urgencies. The project, despite the fact that is developing within the framework of academia, is an evidence-based design that is supported on data and established examples, and devises an economic strategy that assures the long-standing sustainability of the living environment. Hence, it aspires to become a new model of housing design, that can be adopted by the profession as a newly generated approach to architectural design, that understand the building -and cities in general- as performing ecologies rather than merely ensembles of built entities.

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