Expanding universes on shrinking footprints
Fascination  Research  Design
Fascination
ILLUSTRATION
PUBLIC/PRIVATE DENSIFYING CITIES
ILLUSTRATION
PUBLIC/PRIVATE (TWIN-PHENOMENA)
THEME
EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

abstract

REGULAR PUBLIC SPACE

EXTENDED PUBLIC SPACE

example
Research
What are architectural tools that create the transfer between public and private?
RESEARCH METHOD
OVERVIEW

well known
existing

abstraction

categories

evaluation
gradients

less known
addition

parallels with ACRREx ‘Teaching Creativity in Mechanical Design’ | Breedvel P. / Herder J.L. / Tomizama T.
Abstracting, Categorizing, Reflecting, Reformulating and Extending
RESEARCH METHOD

ABSTRACTING
RESEARCH
MAIN CATEGORIES

Distance
- How far am I from the window?

Dwelling Function
- What space is behind the window?

Dwelling Enclosure
- Can I see through the dwelling?

Urban Layout
- Is the urban space public? (before the window)

Facade Enclosure
- How flowing is the transition?
In my conclusion, I also mention that we as architects cannot influence all factors determining a public-private situation.
Design
<table>
<thead>
<tr>
<th>Category</th>
<th>Desired Qualities</th>
<th>Design Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban strategy</td>
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<tr>
<td>Building</td>
<td>expand universe / densify inner city on small footprint</td>
<td>implement my research</td>
</tr>
<tr>
<td>Dwelling</td>
<td>transition between public and private adaptable for future lifesituation</td>
<td>freedom of choice</td>
</tr>
<tr>
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</table>
AMSTERDAM INNER CITY
CURRENT SITUATION VS FUTURE

urban block

healthy urban block

flood risk
urban heat

rain & heat buffer

densification

car-presence

push out car
Where would Amsterdam need a public space upgrade?
GREEN LOOP
BIKE
15.8 km
GREEN LOOP
ONE BIG PARK

ONE BIG PARK
GREEN LOOP
PARK THEMES
ART & CULTURE
VONDELPARK
WESTERPARK
VLIEGENBOS
NOORDERPARK
ZOO
SPORT
SWIM
ROUWING
PORT
VIEW
GREEN LOOP
PARK THEMES
ART & CULTURE
VONDELPARK
WESTERPARK
VLIEGENBOS
NOORDERPARK
ZOO
SPORT
SWIM
ROUWING
PORT
VIEW
GREEN LOOP
SHAPE WITH MINIMAL REDEVELOPMENTS

VONDEL PARK
WEST PARK
NOORDER PARK
VLIEGENBOS
PORT
VIEW
SPORT
SWIM
ROUWING
ZOO
ART & CULTURE
CO2 - INNER CITY TRANSPORT
The goal of progressive cities and citizens, is the reduction of CO2 emissions. This promotes not only transport by public transport, but an active way of moving. In this sense, the bicycle is once again the forerunner.

LEISURE
It is one of the key reasons for people to go to parks in a city. It is connected to socializing and relaxation and improves well-being. A good city has to provide leisure places spread around and in reachable distances for its citizens.

MIGRATION
Animal migration in the built environment is only limited within parks and optional biocorridors. The danger of traffic does not allow certain species to migrate. This has a direct impact on biodiversity.

MOBILITY
The goal of progressive cities and citizens, is the reduction of CO2 emissions. This promotes not only transport by public transport, but an active way of moving. In this sense, the bicycle is once again the forerunner.

SPORT & HEALTH
Sport and health are two closely related fields. A city has to offer safe environment - indoors as well as outdoors - for its citizens to do sport and animate them to live a healthy lifestyle.

GREENERY
Nature is an important part of our life. Not only that plants produce the oxygen we breath, but also being visually connected to nature on a workplace increase productivity.

HEAT AND RAINBUFFER
Greenery also improves the climate within the city. If city greenery covers a sufficient amount of sqm it significantly reduces urban heat and acts as rainbuffer.

GREEN LOOP
BENEFITS

KM TRAVELLED PER KG CO2
Amsterdam bouwt parkeergarage onder de gracht

Amsterdam zet plannen voor fietsbrug over het IJ door

De minister is tegen, Rijkswaterstaat is kritisch en ook scheepvaartprovincie zijn er niet blij mee, maar dat houdt de gemeente Amsterdam niet tegen. Als het aan het college ligt, komt de fiets- en voetgangersbrug over het IJ er geenszins in januari presenteert de gemeente plannen om de verbindingen over het IJ te verbeteren. Fietsers en voetgangers moeten nu met de veerboot oversteken, maar daar wordt het steeds drukker.

De kop van Java-eiland met rechts het Kamerstraatgebied in Amsterdam-Noord. Op de kade nieuwe wijk te zien (archief) ANP

Het ingang van de parkeergarage onder de Amsterdamse Waalstraat. De nieuwe parkeergarage zal worden gereikt door een tunnel onder de gracht. De tunnel wordt voltooid in 2022. ANP

Dus wie terug naar Amsterdam Centrum wilde...
What site could become a strong stand for “Expanding universes on shrinking footprints”? 
For its completion into a continuous circular route, the LOOP has to cross the IJ on two locations. The marked locations appears to be an interesting design site.
DESIGN SITE
STUDY

NORTH  RIVER - IJ  SOUTH
Designing connection over IJ ...

merged with (not only) dwelling-program
STUDY
OCCUPIED BRIDGES

Krämerbrücke
Ponte di Rialto
Pont Notre Dame

Ponte Vecchio
Old London Bridge
Pulteney Bridge
OCCUPIED BRIDGES
PONTE VECCHIO
DESIGN
PARK
new park & living experience
this plan most beneficial to the area / reacting to its urban surroundings / expanding universes on shrinking footprints / ship transport / comfortable bike experience
MAIN STRUCTURE
SUPPORTS

36m

1255m

N
PLAN
1. FLOOR
PLAN
2. FLOOR
PLAN
3. FLOOR
PLAN

4. FLOOR
PLAN
5. FLOOR
PLAN
6. FLOOR
PLAN
7. FLOOR
DIVERSITY WITHIN UNITY

AMENITIES such as sportfacilities / cafes

FOYERS = vertical connections between parks

DIVERSITY IN STREETS & DWELLINGS

ONE ARCHITECTURAL LANGUAGE

CAFES / LOCAL SHOPS

MEETING POINT

WORKING

WORKING

GSEducationalVersion
BLOCK SYSTEM
 DWELLINGS
DWELLING
BLOCK SYSTEM

v5

v6

m8

m9

m10
DWELLING
BLOCK SYSTEM

v5

v6

m8

m9

m10

v2

v3
STRUCTURE OF ONE UNIT
EXAMPLE R1 / R2
CONSTRUCTION PROCESS
EXAMPLE R1 / R2

COMPONENTS PRODUCED IN CONTROLLED ENVIRONMENT

COMPONENTS SHIPPED ON SITE

REINFORCED CONCRETE SUPPORTS

PLACING LONG SPAN COMPONENTS

PLACING LIGHT WEIGHT COMPONENTS

2 LEVELS OF PUBLIC SPACE

ADDING GREENERY OF PARKS
CONSTRUCTION PROCESS
COMPONENTS PRODUCED IN CONTROLLED ENVIRONMENT
CONSTRUCTION PROCESS
COMPONENTS SHIPPED ON SITE
CONSTRUCTION PROCESS
REINFORCED CONCRETE SUPPORTS
CONSTRUCTION PROCESS
PLACING LONG SPAN COMPONENTS
CONSTRUCTION PROCESS
PLACING LIGHT WEIGHT COMPONENTS
CONSTRUCTION PROCESS

2 LEVELS OF PUBLIC SPACE
CONSTRUCTION PROCESS
ADDING GREENERY OF PARKS
BIM MODEL
3D SECTION
BIM MODEL
3D SECTION
UNITY WITHIN DIVERSITY
UNITY WITHIN DIVERSITY

FASADES

STAGE 1

STAGE 2

STAGE 3
FASADES
3 STAGES

STAGE 1

STAGE 2

STAGE 3
WATER FASADE
PUBLIC SPACE = IJ
IMPORTANT FACTOR FOR THE WATER FACADE WAS SUPPORTING THE FORM OF THE BUILDING (LENGTH AND ONE OBJECT) AS WELL AS MAXIMAL VIEW ON THE RIVER SECTION
EMPHASIZING BUILDING LENGTH
WATER FACADE
DETAIL
FORM - WATER FASADE
PARK FASADES
PUBLIC SPACE = PARK
INBETWEEN SPACE
2 FASADES

VEIL
IN-BETWEEN SPACE
INCREASE IN PRIVACY
UNITYFING
VARIOUS ACCESES AND SPACES

BIG VARIATY WITHIN UNITY

GALLERIES
BALKONIES

CORRIDORS

GROUND FLOOR TERRASSES
FREEDOM OF CHOICE
PUBLIC AND PRIVATE

PUBLIC

PRIVATE

OPEN

GSEducationalVersion 1.3
FREEDOM OF CHOICE
PUBLIC AND PRIVATE

PUBLIC
PRIVATE
OPEN

PUBLIC
PRIVATE
CLOSED
FREEDOM OF CHOICE
PUBLIC AND PRIVATE

PUBLIC | PRIVATE
--- | ---
OPEN

PUBLIC | PRIVATE
--- | ---
CLOSED

PUBLIC | PRIVATE
--- | ---
CLOSED CURTAINS
MATERIALS
IMPRESSION
CLIMATE - GREEN LOOP

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EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

IJ area = 44 984 m²

2*4 230 m²
+ 11*60 m²

footprint = 9 120 m²

44 984 m²
- 9 120 m²

perserved public space = 35 864 m²

21 280 m²
+ 20 231 m²

new public space = 41 511 m²

3 896 m²
+ 16 625 m²
+ 570 m²

private outdoor spaces = 21 097 m²

indoor space = 91 680 m²

new public space 41 511 m²
private outdoor spaces + 21 097 m²
indoor space + 91 680 m²

building = 154 288 m²

perserved public space + 35 864 m²

dealt with an area of = 190 152 m²
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ACHIEVED QUALITIES
EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

SITE SPECIFIC DESIGN

AMSTERDAM FUTURE PLANS

PROMOTING HEALTHY LIFESTYLE AND BIKE

VARIOUS ROUTES FOR BIKING & WALKING & SHIPS

CAMPTURING BIG PANORAMA AND VIEW ON SURROUNDINGS

EXPANDED PUBLIC SPACE + DENSIFIED THE INNER CITY ON VERY SMALL FOOTPRINT OVER THE IJ

BUILDING PREFABRICATION IN CONTROLED ENVIRONMENT

ADAPTABILITY FOR FUTURE LIFESITUATIONS
DIVERSITY IN UNITY

FREEDOM OF CHOICE (LIVING & CROSSING)

UNITY IN DIVERSITY

FASADE ARE FAMILY (SAME DNA)

DWELLINGS ARE FAMILY (SAME DNA)

LABORATORY FOR RESEARCH RESULTS

VIA BUILDING FORM / PLANS / ACCESES / FASADES / ETC

MAXIMIZED VIEW WHILE MAINTAINING PRIVACY

UNIQUE LIVING AND PARK EXPERIENCE
Thank you.
CEILINGS OF PUBLIC AREAS AND CORRIDORS ARE COLORED FOR IDENTITY AND PERSONALIZATION PURPOSES
CONNECTION

BIKE FRIENDLY

SHIP TRANSPORT

FRAMWORK FOR SYSTEMATIC DESIGNING
Application of systematic framework, which I developed during my research process.

combination of functions via basketbar
private space elevated above ground level
public/private throughout the building
private space below ground level

public/private

built connection

enable shiptransport

700m (>6%)
1200m (<6%)