# DWELLING GRADUATION STUDIO DUTCH HOUSING

# 3 rd GOLDEN AGE

#### **RESEARCH BOOKLET**

#### Dimitrios Papatheodorou 4452631

Mentors: Theo Kupers Pierijn van der Putt

2017-2018

architecture & dwelling



#### HISTORY OF AMSTERDAM

First Golden Age (1600-1700)



TRADE / VOC



STOCK EXCHANGE



MASS IMMIGRATION



WORLD CENTER OF TRADE





https://upload.wikimedia.org/wikipedia/commons/f/f7/Amstelredam\_Anno\_1623\_by\_Dirck\_Cornelisz.\_Swart.jpg

#### HISTORY OF AMSTERDAM

Second Golden Age (1800-1900)



TRADE



INDUSTRIAL REVOLUTION



PALEIS VAN VOLKSVLIJT Beginning of 2nd G.A.



DESTRUCTION BY FIRE End of 2nd G.A.



#### TURNING POINT: BREXIT

Amsterdam's opportunity to absorb business from the UK.





Not only do 90 percent of the Dutch speak English, many speak it better than the English themselves. Its schools are ranked the best in Europe, and there are plenty of English-language options. The city has beautiful architecture and housing options, picturesque canals, excellent restaurants, music and theater, lively night life, and a cosmopolitan and tolerant attitude cultivated over centuries as a major global trading center.

#### BUSINESS POLITICS TOP STORIES

# AMSTERDAM WINS EU MEDICINE AGENCY, 900 JOBS LEAVING LONDON OVER BREXIT

By Zack Newmark on November 20, 2017 - 18:58

## AMSTERDAM: POTENTIAL FINANCE & BUSINESS HUB

Strategic Location & Connectivity



SCHIPHOL AIRPORT



INTERNATIONAL RAIL CONNECTIVITY



SEAPORT AMSTERDAM 4th in EU

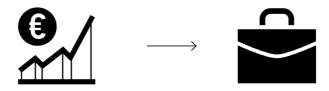


PROXIMITY TO EU INSTITUTIONS

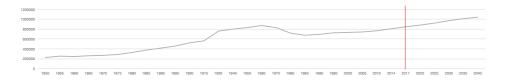


# **SOCIOECONOMIC IMPACT**Jobs & housing demand

#### Economic growth resulting in more jobs



#### Population growth prognosis



## Rising immigration & housing demand



## **THE NOTION OF A METROPOLIS**: μήτηρ (mother) + πόλις (city) city/state of origin of a colony

- Mother cities of the ancient world sent out settlers to form colonies.
- Mother cities and colonies based on trade relationships.
- Mother cities were the administrative/economic centres for the colonies.

#### Ancient Greek trade & colonialisation, 500 B.C.



http://nsms6thgradesocialstudies.weebly.com/uploads/3/7/2/4/37241339/2463009\_orig.jpg

#### Examples from antiquity: Athens, Rome



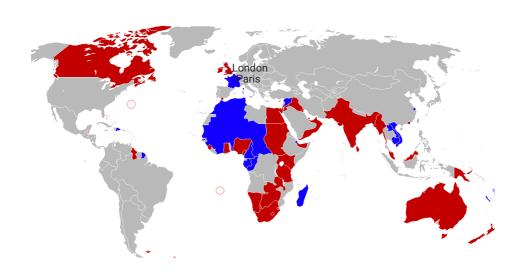


#### METROPOLIS OF THE 19th CENTURY

Dependent on capital from a colonial economy

- Transnational colonialism financed metropolitanism
- British & French: major colonial powers in the 19th century
- Based on international trade London & Paris became major economic centres
- Other cities followed, including Amsterdam, Vienna etc.





#### METROPOLIS OF THE 19th CENTURY

#### Reshaping of major cities

- Undervalued ares redeveloped by the wealthy to reflect their class values (equality with aristocracy, liberty in property, freedom of religion & press)
- Targeted overcrowded & unsanitary districts. e.g. London, Paris
- Metropolitanism reshaped the city to fit the imagined possibilities of the bourgeoisie.

#### Paris before & after



http://www.museumofthecity.org/wp-content/up loads/2013/08/11.jpg

http://paris1900.lartnouveau.com/paris00/gds\_magasins/printemps/cpa/magprint1.jpg

#### London before & after



http://paris1900.lartnouveau.com/paris00/gds\_magasins/printemps/cpa/magprint1.ipg

http://c8.alamy.com/comp/BHRM2C/regent-street-quadrant-westminster-london-late-19th-century-BHRM2C.jpg

#### METROPOLIS OF THE 19th CENTURY

Phantasmagoria of the metropolis

- phantasmagoria facilitated by trade, expositions and globalisation
- phantasmagoria was the commodity in display
- · originated through urban arcades and world expositions
- enabled architectural advances & new typologies
- · kaleidoscopic metropolis with visual stimuli

"Metropolitanism created an imaginary city of heightened possibilities that interacts with the place of lived experience\* to produce dislocations."

\*housing shortage, disease, political uncertainty, rapid population growth, informational explosion

Paris arcades

London Crystal Palace, exterior



nttp://media.r.bntannica.com/eb-media/20/114820-004-5A5281E

Crystal Place, interior exhibitions

Amsterdam Paleis van Volksvlijt



 $https://heyjoenyctour.files.wordpress.com/2014/09/10-interior-of-the-crystal-palace-by-thoms-paxton-1851-\_jpg\\$ 

http://images.memorix.nl/ams/thumb/500x500/de14c99e-1193-49ee-d7bb-425367e1a2e8.jpg

#### METROPOLIS IN LITERATURE

### The metropolis of tomorrow - Hugh Ferris

- · Popular image of the future: Buildings growing higher and higher.
- From bird's eye, it is impossible to assess the impact on the environment.
- · Light & air crucial to public health & safety.



#### "The future metropolis"

- Close juxtaposition of vertical elements cannot be appreciated.
- Citizens' habitual prospects are ample vistas. With upright postures their glance can traverse the vista and find its end at a dominating pinnacle.
- Towers placed at intersections of avenues.

#### MODERN METROPOLIS

## Manhattan as the embodiment of modern metropolis

- collective imagination for the metropolis cultivated through art & film.
- Manhattan as backdrop for numerous movies.



#### MODERN METROPOLIS

#### Symbols & characteristics of the modern metropolis

- congestion
- high density
- · high rise
- · pavements & shopping streets
- superimposition
- visual stimuli
- grandeur
- cultural constellations
- city than never sleeps
- anonymity
- liberating character
- hospitable to non conformist ways of life
- habitat of the lonely individual
- confrontations
- public transport
- · cosmopolitan lifestyle



https://cdn.shutterstock.com/shutterstock/videos/6239363/thumb/1.jpg

## PROBLEM STATEMENT

#### Housing Shortage



△ 17° broken clouds

Saturday 20 May 2017

News | Features | Blogs | Housing | Best of the Web Home | Politics | Business | Society | Sport | Education | Health | Tech & Media | International | Europe

f 💆 🖇 in 🔊 💌

Expats 'shun' Amsterdam due to housing



**Features** 



#### Private sector rents continue to rise, shortage of housing intensifies



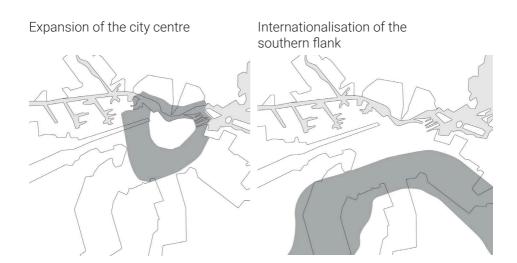




**DutchNews podcast - The** Moonlighting Monarch Edition -

- Greater internationalisation brings more foreign companies.
- Companies are struggling to find international staff because of competition for housing.
- Expats seek rentals rather than purchase housing due to temporary nature of their stav.
- Expats demand higher standards than what is available, especially for rentals
- Shortage of quality mid-priced rentals. Instead, mediocrity at high price.
- Shortage keeps forcing prices up.
- Expats are starting to steer clear of Amsterdam due to the availability & cost of housing.
- The lack of expat qualities is beginning to mar Amsterdam's image as a world metropolis.
- Housing poses serious obstacles if Amsterdam wants to attract business from London after Brexit.

#### AMSTERDAM STRUCTURAL VISION 2040







Function change: more mixed-use



Effective public transport



Quality Public Spaces



## ISSUES OF DENSIFICATION

## Inner City Limitations

High Land Values



UNESCO Heritage Site



Few empty plots



#### PREVIOUS APPROACHES ON HOUSING SHORTAGE

#### Outdated urbanisation methods found in Amsterdam

#### SUBURBAN SPRAWL - Low density

- Single family (row) houses with private gardens.
- Longer commutes & larger carbon footprint.
- Lack of facilities in suburbia.
- Space becoming less a medium in which we mix and more a barrier that insulates us from those unlike ourselves.
- The further we live from each other, the less we are capable of seeing each other as people with shared dreams and struggles and the more likely we are to see an other, unlike us, whom we fear and demonize.

#### MODERNIST HIGH RISE ESTATES - High density

- High rise estates among vast green space.
- Smaller footprint.
- Modernism aimed to invert the relationship between built and open space resulting in deleterious effects on street level.
- Modernist city: too much open space little real and memorable open space.
- Segregated functions.

#### Dystopian high rise architcture







#### CURRENT APPROACH OF OTHER EUROPEAN MAJOR CITIES

Competing to attract business while addressing existing issues of historic city fabrics and high land values



#### Paris announces seven skyscrapers to boost post-Brexit business









Jessica Mairs | 27 February 2017 | 40 comments

#### Frankfurt embarks on Brexit building boom with new high-rises by BIG, UNStudio and more



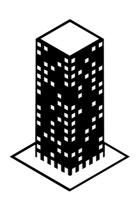






f 2 2 6 in t

Amy Frearson | 19 October 2017 | 7 comments



#### **RESEARCH QUESTIONS**

- What are the design criteria for lively and safe public spaces in a metropolitan high rise environment?
- How can high rise structures be incorporated into the city fabric through the use of the plinth and eye level perception?

#### **METHODOLOGY**

The methodology to address the research questions and the design assignment consist of the following steps:

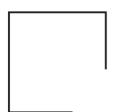
- Consulting relevant literature with design guidelines on the public realm with a particular focus on the design of plinths, extracting points to consider further in the research.
- Site visits to locations of perceived metropolitan character with high rise structures in place.
- Use of diagrammatic plans and sections examining the proportions and form of public space.
- Empirical research with in situ observation of the public realm. Emphasis on the plinths, their function and the activity in the immediate context, using photographs to record the observations.
- Use of photographs as a way to analyse the form and material treatment of the plinths and record the activity around them.

#### PERCEPTIONS OF THE CITY



#### **IMAGEABILITY**

- distinct parts / recognisable / memorable / feelings evoking
- landmarks: singularity in relation to the city & larger context
- landmarks: visual termination points / orientation points / points of contrast / addressing anonymity



#### **ENCLOSURE**

- streets and public spaces visually defined by buildings/ trees etc.
- · height-width relationship between building & street
- lines of sight blocked to create room-like space
- continuous facade encourage pedestrian use of streets



#### **HUMAN SCALE**

- texture / materials / detailing / furniture relating to scale of humans
- · cross sectional area of a building
- amount of fenestration
- facade partitioning



#### TRANSPARENCY

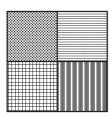
- · what happens beyond public space
- what lies beyond street can also be imagined (e.g. entryways)
- transparency critical at street level
- activities externalised or brought to sidewalk

#### PERCEPTIONS OF THE CITY



#### **COMPLEXITY**

- visual richness of a place
- related to changes in height/setback/width/trees/ texture/furniture/signage
- presence of people & activity add to complexity and attract others
- layering of street edges: pavement-arcade-courtyard
- diverse edges/ social settings/ uses



#### COHERENCE

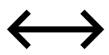
- visual order & consistency
- window patterns/ massing/form/ setback from street
- highly complex should be coherent



#### I FGIBILITY

- understandable & navigable spparticular visual qualityorientation & reference points understandable & navigable spatial structure

- edges/nodes/visually interesting features



#### LINKAGE

- visual & physical connections
- connectivity
- horizontal links & collisions give life & kinetic energy to the city

#### PUBLIC REALM

#### The role of public space in inner cities

Public Open space is an outdoor area in metropolitan region which is open to the freely chosen and spontaneous activity, movement or visual exploration of a significant number of city people. Public space has a direct bearing on our daily lives. Public spaces will become more important as more people are moving to urban centres.

#### POS successful when:

- It becomes conducive space for interaction
- It attracts many visitors to do their activities
- a wide range of activities occur there (individual or group, informal and suitable for recreation)
- it is democratic and non-discriminative
- it is accessible for all class and age of people including disabled

#### Public space design

- Design and quality of public open space influence the use of public open space and activities occur in the place.
- High quality, well designed and managed parks and urban public spaces will promote the quality of life.

#### Functioning of public space

- An open city must be both free and controlled to maintain order.
- Control is defined by local ethics codes and public strategies.
- A balance between freedom and control must be maintained in public space.

#### Privatisation of public space

- Market liberalism & government downsizing lead to a decline in government provisions of public space.
- Like elsewhere, Dutch local authorities are acting in a more entrepreneurial manner. They are no longer solely focussed on the provision of services for residents but are also involved in the promotion of the prosperity of the city and its ability to attract jobs and investment
- The image of the city and its lifestyle can also benefit from public spaces of good quality.
- In search of funding to redevelop public space, local governments may turn to the private sector, which – unlike the public sector –can usually raise the necessary funds.
- It seems inevitable that the private sector will play an increasingly important role in urban redevelopment in the Netherlands.

#### PUBLIC REALM

#### Privatisation of public space



#### SONY Plaza, Berlin, Germany

- Private ownership with leisure & entertainment facilities
- But not accessible to performing artists, beggars etc.
- Activities not bringing profit: not desired



#### Beursplein, Rotterdam, Netherlands

- Private ownership with leisure & retail faclities.
- Invisible boundaries: part of the city
- Restrictions apply (e.g. cycling)



#### Liverpool ONE, Liverpool, UK

- Private ownership with leisure & entertainment facilities.
- Invisible boundaries: part of the city
- All activities welcome (including protests, street performers
- City rules apply

#### Prerequisites for privatised public space

- Combine local economic development while stimulating public life and community development.
- A well-functioning public domain can also exist in privately owned spaces of consumption.
- Need for legislative changes saying that privately owned public places have to be governed by the law of the land and not by the will of the property developer.
- Ownership doesn't have to be the defining element.

#### DESIGNING / DETAILING PUBLIC SPACE

#### A keyword list

# PROTECTION

# 1. Protection against traffic & accidents

- -traffic accidents
- -fear of traffic
- -other accidents

# 2. Protection against crime & violence (feeling of safety)

- -lived in / used
- -streetlife
- -streetwatchers
- -overlapping functions -
- in space and time

# 3. Protection against unpleasant sense experiences

- -wind/draft
- -rain/snow
- -cold/heat
- -pollution
- -dust, glare, noise

# COMFORT

# 4. Possibilities for WALKING

- -room for walking
- -untiering layout of streets
  -interesting facades
- -no obstacles
- -no obstacles -good surfaces

# 5. Possibilities for STANDING/STAYING

- -attractive edges
- -defined spots for staying
- -supports for staying

## 6. Possibilities for SITTING

- -zones for sitting -primary & secondary sitting possiblities
- -benches for resting

## 7. Possibilities to SEE

- -seeing distances
- -inhindered views
- -interesting views
- -lighting (when dark)

# 8. Possibilities for HEARING/TALKING

- -low noise level
- -bench arrangements

# 9. Possibilities for PLAY/UNFOLDING ACTIVITIES

-invitation to physical activities, play, unfolding & entertainment - day & night and summer & winter

# HABAAOCAB

#### 10. Scale

-dimension of buildings & spaces in observance of the important human dimensions related to senses, movements, size & behaviour

# 11. Possibilities for enjoying positive aspects of climate

- -sun/shade
- -warmth/coolness
- -breeze/ventilation

#### 12. Aesthetic quality/ positive senseexperiences

- -good design & good detailing
- -views/vistas
- -trees, plants, water

#### PUBLIC SPACE PHYSICAL QUALITIES

Street/square



#### SITTING SPACES

- provision of sitting spaces provides the opportunity for resting/discussing/meeting etc.
- benches/chairs positioning & configuration in clusters
- steps, ledges, tree planters offer sitting opportunities



#### SUN & LIGHT

- · sun is important but light even more
- · light or shadow preference depending on season
- reflectied light from surrounding buildings



#### WATER

- water sound
- · water as a sight element
- interactive use of water (cooling/playing)
- waterfront attractiveness



#### **TRFFS**

- tree canopy providing shadow
- affecting microclimate
- planted clusters of tress provide larger canopies

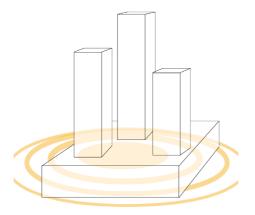


#### FOOD & TRIANGULATION

- food stalls
- restaurant & cafe tables attract people
- performances
- sculpture & art

#### THE USE OF PLINTHS

#### Mediating between public & private space



#### FOR PLINTHS TO SUCCEED

- central location attracting more people
- · positioned along walking routes
- provide ample public space
- programme including popular functions (e.g. food & beverage)

#### **FUNCTIONS**

In fragmented societies people are united by retail and by the shared stimulation of the sense of sight - by spectacle.

- good plinth: mix of functions including social functions & housing
- · plinths boosting urban economy
- · Retail/cafes/restaurants: highest profits
- Need for flexible spaces
- plinths create social & physical experiences (odours, sight, etc.)
- face to face contacts happen in cafes, bars, pubs, libraries, fitness etc.
- semi public spaces (shops, cafes) connect us to the city and make us feel at home
- plinth 24hour operation guarantee eyes on the street, liveliness & feeling of safety



#### GOOD PLINTH CRITERIA

Plinths are part of a vivid and vibrant city life and city spaces: providing comfort, social interaction and eyes on the street.

#### THE BUILDING

- small scale units
- variety of functions
- · transparent façades
- · special character of the architecture
- richness in material
- · vertical orientation of the façade
- a well functioning 'hybrid zone' (the transition from private to public)
- appropriate signing
- flexibility in height (4+m)
- flexibility in the land use plan (zoning)

#### THE STREET

- pleasure to walk in
- physical comfort (wind, sound, sun, shadow, maintenance)
- definition (the height should at least be half the width)
- · variation in buildings
- quality that binds the eye
- good tree canopy
- parking facilities
- clear beginning and ending of the street
- possibilities to sit
- density

#### THE CONTEXT

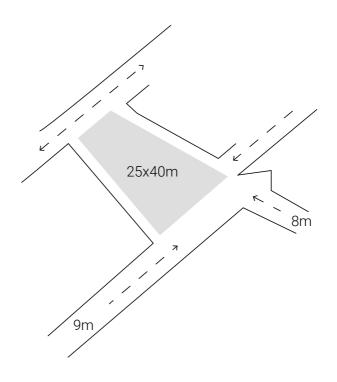
- plinth-oriented consumer audience (pedestrian streams day and night, economic and cultural capital in the
- surrounding neighbourhoods)
- special urban programme or a special cluster of economic or cultural functions
- good connections to the network of squares and parks
- coherent urban design
- a good position in the urban fabric and in the city's walking and cycling routes

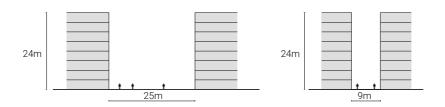
# **CASE STUDIES**

# **CASE STUDY #1** St. Paul's Square, Liverpool functions: office/hotel/residential/parking/cafes











#### **PERCEPTIONS**

## enclosure, proportions, visual termination, light (reflection)



Buildings provide sense of enclosure and points of visual termination.



Plaza proportions provide a sense of enclosure (room-like) and adequate access to sunlight.



Street proportions provide enclosure and the vista is terminated by landmark building.



Glass facade provides reflective lighting despite narowness of the street.

#### **PLINTH**

## height/blind vs. transparent/transparent vs. reflective



Sense of grandeur due to heightened plinth and provision of sheltered space.



Blind plinth and lack of activity results in a lack of safety and security.



Frozen or highly reflective glass surfaces interrupt indoor outdoor communication.



Transparent glass ensures the visibility of internal activity.

#### **PUBLIC SPACE**

## Sitting spaces: benches/ledges/planters



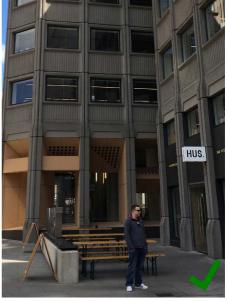
Combination of planters and sitting arrangement provide sitting oportunity in contact with nature.



Benches provide sitting opportunities, even in more deserted spaces.

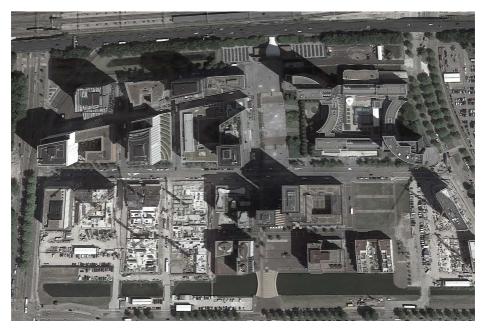


Hard landscaping in form of street ledge provides sitting & resting opportunity.



Externalisation of activity through outdoor sitting arrangements in cafes, restaurants etc.

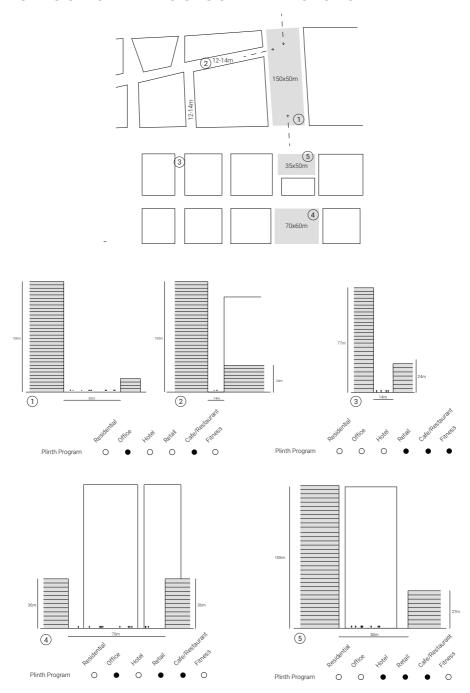
# CASE STUDY #2 Zuidas, Amsterdam functions: office/hotel/residential/retail/cafes/restaurants





http://medias.photodeck.com/11ea291d-f1b5-49db-aa16-518695792df0/302123\_xgaplus.ing

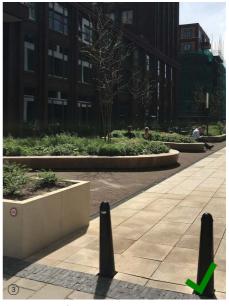
#### PUBLIC SPACE DIMENSIONS & PLINTH FUNCTION



#### STREETS & PLINTH TREATMENT



Enclosure, transparency and visual termination



Comination of planter and sitting opportunities with acess to direct sunlight.



Horeca function with externalised activity.

Overhang provides protection from weather.



Transparency in residential function mitigated by buffer zone with planters and sitting space.

#### **PUBLIC PLAZAS**



Raised plaza discourages users to enter.



Plaza taken over by parking ruling out other uses.



Greenery and sitting space encourage the use of the public plaza.

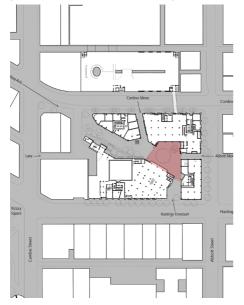


Sculptures and art installations provide opportunities for usage of public spaces.

#### CASE STUDY #3 Woodward's, Vancouver

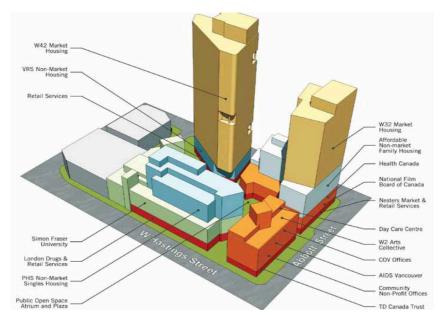
Henriquez Partners Architects, 2010

High density mixed-use scheme addressing inclusivity with affordable housing provision in return for more private floor space. Mid-rise & High rise on plinth.





https://upload.wikimedia.org/wikipedia/commons/7/78/W43\_Tower\_Vancouver.jpg



#### PUBLIC REALM AS A COMMUNITY BINDER

Public plaza & atrium enable multiple uses all year long, including festivals and shelter for the homeless in the winter.





https://positivelybeaming.files.wordpress.com/2012/08/img\_2429.jpg

#### **RESULTS & CONCLUSIONS**



"Blind" plinth with no activity.

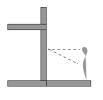


Transparent plinth & office function. Internal activity visible.

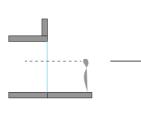


Transparent plinth with projecting canopy. HORECA function. Extended activity.

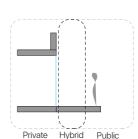
#### PLINTH ARCHITECTURAL TREATMENT



Blind Plinth



Transparency







Weather Protection



Externalised activity



Softening boundaries

#### PLINTH PROGRAM



Mix of functions for 24/7 activity



**HORECA** 



Retail



Residential



Business

Frequency of ocurrence

Amount of people in close proximity

#### **CONCLUSIONS & DISCUSSION**

The design elements of plinths do indeed play an important role in the liveliness and feeling of safety in the immediate public realm. "Blind" pinths contribute negatively to the feeling of safety for the users. A hard, impermeable boundary provides no reassurance to the street users as there are no active observers on the street that could contribute to the feeling of being watched. Thus, this could result in increased possibilities of anti-social behaviour in such spaces. Transparent plinths, on the other hand, allow for visual interaction of passersby and internal users by being able to see each other through the facade and watch the activity taking place on both sides. Observing internal activity becomes part of public life, enhancing the feeling of safety on the street and encouraging its active usage. Additionally, the use of public-private hybrid zones between the facade and the street enable an enhanced indoor-outdoor connection by promoting the externalisation of activity. A hybrid zone allows for extended activities that encourage users to participate and enhance the overall liveliness of the space. The combination of a transparent plinth, a hybrid zone and a diverse mix of program in the plinth that ensures 24/7 use, can add to the feeling of safety over the day by providing the necessary supervision of public space through the "eyes on the street".

Site visits and observations were carried out on specific days and times and therefore results could vary throughout the day and year. For instance, night-time versus daytime, weekday versus weekend observations could differ and can also be affected by external factors, such as weather conditions. Also, the sample of visited sites is limited and could vary in different georgraphical locations and according to the local cultural norms. Finally, photographs capture very specific points in time and therefore, generalised conclusions on activity over longer periods of time may not be reliable.

#### LITERATURE

- Alexander, C., Ishikawa, S., Silverstein, M., i Ramió, J. R., Jacobson, M., & Fiksdahl-King, I. (1977). A pattern language. Gustavo Gili.
- Banerjee, T. (2001). The future of public space: Beyond invented streets and reinvented places. Journal of the American Planning Association, 67(1), 9-24.
- Boer, R., & Minkjan, M. (n.d.). The Tyranny of the Filter Bubble and the Future of Public Space. Retrieved May 21, 2017, from https://www. failedarchitecture.com/the-tyranny-of-the-filter-bubble-and-the-future-of-public-space/
- Cullen, G. (1971). The concise townscape. Routledge.
- Ewing, R., & Clemente, O. (2013). *Measuring urban design: Metrics for livable places*. Island Press.
- Gameren, D. (2009). Het luxe stadsappartement: The luxury city apartment (DASH, 2). Rotterdam: Nai Uitgevers.
- Gehl, J. (2011). Life between buildings: using public space. Island Press.
- Gehl, J. (2013). Cities for people. Island press.
- Ghent Urban Studies Team. (1999). The urban condition: space, community, and self in the contemporary metropolis. 010 Publishers.
- Jacobs, J. (2016). The death and life of great American cities. Vintage.
- Karssenberg, H., Laven, J., & van't Hoff, M. (2012). The City at Eye Level. The City At Eye Level Lessons For Street Plinths, 10-21.
- Koolhaas, R. (2014). Delirious New York: a retroactive manifesto for Manhattan. The Monacelli Press, LLC.
- Lynch, K. (1960). The image of the city (Vol. 11). MIT press.
- Montgomery, C. (2013). Happy city: transforming our lives through urban design. Macmillan.
- Nasution, A. D., & Zahrah, W. (2012). Public open space privatization and quality of life, case study Merdeka Square Medan. Procedia-Social and Behavioral Sciences, 36, 466-475.
- Nowobilska, M., & Zaman, Q. M. (2014). Potsdamer Platz: The Reshaping of Berlin. Springer.
- Rotenberg, R. (2001). Metropolitanism and the Transformation of Urban Space in Nineteenth-Century Colonial Metropoles. American anthropologist, 103(1), 7-15.
- Van Melik, R., Van Aalst, I., & Van Weesep, J. (2009). The private sector and public space in Dutch city centres. Cities, 26(4), 202-209.
- Wainwright, M. (2012, June 11). Liverpool One no longer feeds into fears around private estates. Retrieved May 21, 2017, from https://www. theguardian.com/uk/2012/jun/11/liverpool-one-private-estates
- Whyte, W. H. (1980). The social life of small urban spaces.
- Whyte, W. H. (2012). City: Rediscovering the center. University of Pennsylvania Press.