Supporting public life through architecture

The parallel histories of Spaarndammerhart's and Het Schip's contribution to public life

AR2A011 Architectural History thesis
MSc Architecture, Urbanism and Building Sciences
Delft University of Technology

Tim ter Heide

4778375

2023

History thesis Name supervisor: dr. ing. Phoebus Panigyrakis

Abstract – The literature about public life is mainly focused on the city as a whole. This research applies the literature about public life to architecture by analyzing two case studies. The design elements of two building in The Spaarndammerbuurt neighborhood in Amsterdam, *Het* Schip (1921) and The *Spaarndammerhart* (2020) are related to the literature about public life. A cohesive definition of public life is formed by reviewing the relevant literature. Then the cases are analyzed by looking at the conception of the building and the architect's aim of the project. Furthermore this is done by comparing the strategies outlined in the literature with site photos taken of the case studies. The research shows a strong presence of design tactics that foster public life in the two case studies. Even though being built a decade apart both buildings have strong similarities in the tactics they apply.

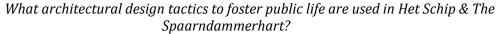
Key words – Spaarndammerhart, Het Schip, social cohesion, social interaction, public life, Michel de Klerk, Marcel Lok architect, Korthtielens architecten, open city

1 | Introduction

The theories that focus on public life are mainly focused on the city as a whole and how it functions. However buildings play a defining role in the perception of the city. Therefore this research will look into the design aspects of buildings that relate to public life.

Theories about architecture and cities focused on people can be led back to Jane Jacobs's (1961) book *The Death and Life of Great American cities*. In this book she argues against the functionalist city with separation of functions and rejects the space devoted to cars. The subject of people-focused urbanism and architecture was further elaborated on by Jan Gehl with his book *Life Between Buildings* with the first edition published in 1971. Furthermore Richard Sennett has shed light on the subject from the sociologist point of view.

In order to review how these theories apply to architecture this research will look into two case studies and analyze the tactics employed to catalyze social cohesion and sustain public life. The two case studies are *Het Schip*, 1914-1921, designed by Michel de Klerk and the *Spaarndammerhart* completed in 2020 and designed by Korthtielens architecten and Marcel Lok architect. The ca. 100 year difference in age of the case study allows for testing the applicability of the literature on buildings from before the theories where first mentioned. The two buildings are both situated in the Spaarndammerbuurt neighborhood in Amsterdam and are of comparable size (see figure 1.01). This means that the buildings are part of the same urban fabric, which places them in the same kind of urban conditions. Moreover the Het Schip is built in the Amsterdam School style which has also clearly influenced the Spaarndammerhart's design. Lastly social housing corporation Eigen Haard, that provides rental housing for people with a low income, was involved in the conception of both buildings. These strong similarities create a good ground for comparing of the case studies. This thesis will address analyze the two case studies with the question:



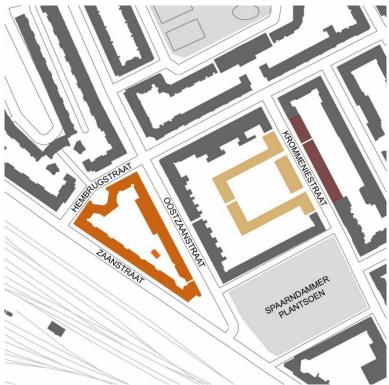


Figure 1.01: Het Schip (orange) and The Spaarndammerhart (red + yellow) are situated right next to each other in the Spaarndammerbuurt, Amsterdam (adapted from OpenStreetMap contributors, n.d.).

This question will be addressed by first looking at the literature that talks about public life. The literature on the subject will be compared to acquire a definition of public life and determine the architectural qualities that support it. After outlining this concept in chapter 2 this will be applied to both case studies, *Het Schip* (1921) and *The Spaarndammerhart* (2020). Chapter 3 and 4 first give background information about the conception of the project and the architect's aim for the project. Thereafter the design aspects of the two case studies are more closely analyzed looking at different aspects that foster public life. This is done by pointing out design elements using photos of the case study and relating these to the relevant literature. Lastly, in chapter 5 a conclusion is given on the research question and recommendations are given for further research.

2 | Public Life and Architecture

In his book *Building and Dwelling* Sociologist Richard Sennet (2018) argues for an 'open city'. He describes that 'open implies a system for fitting together the odd, the curious, the possible' (ibid., p. 5). He goes against the current practice of the 'closed' master planned office park, campus or residential tower set in green and advocates for more complex and experiment friendly built forms that enrich experiences in the city (ibid., p. 11). He uses the example of the media lab of MIT to show what 'open' can establish; in this case 'open' contributes to innovation by allowing people to work together in an experimental way. To achieve an open city he proposes five open forms which offer design principles for the built environment (ibid., p. 205). The first open form he describes is a 'synchronous space' (ibid., p. 206). This is a space where different activities happen synchronously. He takes the agora, the traditional Greek market and gathering square, as example of such a space. Here people interact in a spontaneous way because of different activities happening at the same time.

The open approach that Sennet argues for has parallels with Jane Jacobs's (1961/2000) book *The Death and Life of Great American Cities*. She writes from the perspective of improving the city's resiliency. In order to achieve this Jacobs (ibid., p. 24) argues for intense diversity of functions to create a thriving neighborhood that can sustain itself economically and socially. She calls for mixed primary uses, small city blocks and concentration to achieve this (ibid., p. 155). These strategies all involve increasing the number of people that roam the streets and boost the number of interactions people have to achieve a more interconnected city.

Jan Gehl has investigated the impact of architecture and urban planning on the possibilities for social interaction in the public space in his book *Life between buildings* (Gehl, 2011, p. 9-13). He describes how different types of outdoor activities enhance each other and increase the number of social activities in the public space.

To increase the coinciding of these activities Gehl (2011, p. 81) describes how bringing people together v. dispersing them is influenced by the design of the built environment. He examines three aspects of the built environment that influence the possibilities for gathering. These are: the level of integration of functions, the receptiveness of the public space and the relation of buildings with the public space.

Aside from that, the conditions for people to move through and stay in the public space must also be favorable (Gehl, 2011, p. 129). To what extend a public space has favorable conditions depends on the activities people might want to employ in it. Gehl (2011, p. 131) argues that most of these activities can be brought down to walking, standing, sitting, seeing, hearing and talking. Architecture that allows for these activities to take place in the public space will increase the duration of people staying in the public space.

Gehl (2011) describes 'Life between buildings' as a spectrum of activities that make public and communal spaces attractive and meaningful. Jacobs (1961/2000) outlines how we can make our cities lively and resilient with the interaction of people and Sennett

(2018) argues for an open city where complexity is celebrated to let a city thrive. These theories all describe how human interaction in the public sphere contributes to a more cohesive, resilient and equitable city. Therefore *vibrant public life* is the driver of a thriving city.

3 | Het Schip (1921), a beacon of social cohesion

Het Schip is a residential complex built in the Amsterdam School style in the Spaarndammerbuurt neighborhood in Amsterdam. The building was designed by Michel de Klerk (1884-1923) for housing association Eigen Haard and was completed between 1920-1921.

3.1 | Historic context

Het Schip is a result of a long run-up to better housing for the working class. The *Woningwet* (housing act) which was enacted in 1902 was the result of advocacy for better living conditions for working class people since the mid-19th century (Diemen et al. 2018, p. 61). The Woningwet dictated that municipalities were required to make a building code and, if they had more than 10.000 inhabitants, had to design extension plans. The Spaarndammerbuurt was part of one of these extension plans (ibid., p. 62). Moreover, the government started to supply loans and grants to municipalities, individuals and associations that exclusively developed social housing.

Eigen Haard was such an association of people. This meant that, besides their rent, people paid a membership fee which made them co-owner of the association. In return they would be able to rent the apartments in the association's buildings. At the time these housing associations were mostly based on existing community groups. The first association, Rochdale, was started by workers of the municipal tram company, Eigen Haard followed later. They were employees of the locomotive factory *Werkspoor* (ibid., p. 23). Most members of Eigen Haard were also affiliated with the Social Democratic Labor Party (SDAP) (Museum Het Schip, p. 119). This like mindedness must have contributed to a more connected feeling amongst the residents.

3.2 | Michel de Klerk, his evolution into artist

Michel de Klerk was not unknown to the struggles of the poor working class himself. He was born in 1884 in a large family of which he was the youngest. His father was the main provider of the family and when he died his mother had to provide for the family along with older brothers and sisters. After his father's death the family moved numerous times. Living in the Jewish quarter in Amsterdam, were the condition of the houses was very bad, he first handedly experiences the poor living conditions of the working class (Museum Het Schip, p. 19).

Michel de Klerk's architecture can mainly be related to the Arts and Crafts Movement. This 19th-century artistic and social movement aimed to promote traditional craftsmanship and reject the mass production of goods. Already in his first job at Eduard Cuypers's office he learned to have a broad orientation of the arts (Frank, 1984, p. 31). Later on he visited England, Germany and Scandinavia where he was inspired by the arts and crafts as well (Museum Het Schip, 2012, p. 22). This is illustrated by the fact that he also made graphic designs and furniture. Frank (1984, p. 34) describes him even designing stage designs for a Shakespeare play. This involvement in the Arts and Crafts does not show a strong interest in creating a strong community. Yet, it does show how De Klerk wanted to build something that was not merely functional but also esthetically pleasing.

3.3 | The conception of *Het Schip*

The development of *Het Schip* can be described through a series of events. Michel de Klerk was first tasked with designing two other housing complexes in the Spaarndammerbuurt

neighborhood by developers, K. Hille and G. Kamphuys (ibid., p. 21). The first of these housing block, built in 1914, was on the Spaarndammerplantsoen, situated between the Oostzaanstraat and Krommeniestraat. After the completion of this building the developers asked De Klerk to design the second building on the Spaarndammerplantsoen. However, rising prices and material scarcity due to World War I caused the project to halt. Yet, Mayor Floor Wibaut's ambitions to create more social housing drove him to arrange for association Eigen Haard to take over the project (ibid., p. 65). The second block was then completed in 1918. Later on, De Klerk and Eigen Haard would be granted the third plot on the Spaarndammerplantsoen to develop the building which would later be dubbed 'Het Schip' completed in 1921.

Because of the sculptural quality of the building and the richness of ornaments the building is often called a palace for the working class. This is most aptly put by a resident saying: 'Is the Spaarndammerplantsoen not a fairy tale you used to dream of as a child, because it was something that, for us as a child, did not exist?' (ibid, p. 117). This boom of beautiful social housing was made possible by the intense efforts of individuals, architects and the government. These advancements in social housing, therefore have to be seen in the zeitgeist of progress for the working class.

3.4 | The design of Het Schip, integration in the city

Het Schip is situated on a triangular site in the Spaarndammerbuurt neighborhood in Amsterdam. The complex includes - beside dwellings - a post office, school and a small office building. The school was an existing building from 1915 built in a more traditional style. Michel de Klerk integrated this building into the design to make the block feel like one whole. The building is bordered by the Hembrugstraat on the northwest side, the Oostzaanstraat on the northeast side and the Zaanstraat on the southwest side.

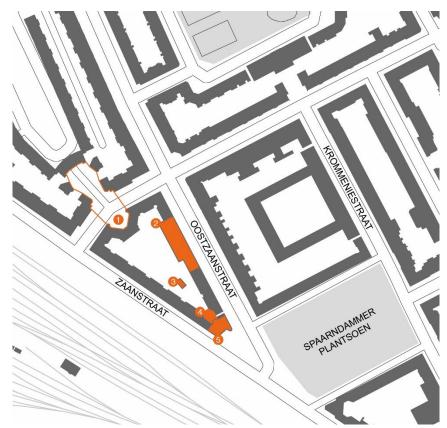


Figure 3.01: Map of the Spaarndammerbuurt Neighborhood with indication of places of interest in and around *Het Schip*. (Adapted from OpenStreetMap contributors, n.d.). (1) Small square on the Hembrugstraat; (2) school building (currently museum); (3) meeting building; (4) courtyard; (5) post office (currently staged for museum).



Figure 3.02: Small square on the Hembrugstraat with spire prominently visible

This small square on the Hembrugstraat (figure 3.02) creates an opening in the urban fabric. Sennet (2018, p. 211) describes this as 'Punctuation' of the urban space as one of 'five open forms' for the city. This punctuation creates markers in the urban space making it more defined and differentiates it from the rest of the city. The square on the Hembrugstraat is regarded as what Sennet (2018, p. 214) calls a 'Semicolon'. Moving through the public space the square makes the user pause and become more aware of his environment. The spire on the square is an example of an 'Exclamation Point' (ibid., 212). The spire extends above the height of the building and creates a marking of the space from afar, also more clearly defining it.

3.5 | The design of Het Schip, soft borders

3.5.1 The courtyard, defined shared space

The relation of *Het Schip* with the surrounding public space is made up of soft borders. One example of this is the courtyard inside *Het Schip* that is situated on the south side of the complex with its entrance on the Oostzaanstraat as highlighted in figure 3.01. The courtyard gives access to ten apartments and the meeting building of the association. Because of the small size and the limited number of apartments that it provides access to, the courtyard is a really intimate space. Meaning, the space is shared with little people, allowing them to take informal ownership of the space and leaving their stuff outside. This is clearly illustrated by the presence of lots of potted plants, seen in figure 3.04. The residents have taken ownership of the semipublic space. Gehl (2011, p. 55) emphasizes the need for these kinds of subdivisions of social structures to achieve greater social cohesion.



Figure 3.03: Entrance to the courtyard from the Oostzaanstraat



Figure 3.04: Appropriation of semi-public space with potted plants, chairs and a side table.

3.5.2 possibilities for interaction

Connected to the courtyard is a pathway (shown in figure 3.05) that leads to a meeting building highlighted in figure 3.01. Backyards of several apartments are situated along the pathway as can been seen in figure 3.06. De Klerk designed low brick walls to demarcate the gardens. These gardens are a good example of what Gehl (2011, p. 113) calls 'transition spaces', spaces in between inside-outside and private-public. They allow people to go out and work in the garden while passively participating in social contact. From being outside and visible for other residents social interaction in the form of a conversation can easily arise.



Figure 3.05: Courtyard with pathway to the office building



Figure 3.06: Pathway to meeting building with adjacent gardens.

Currently the gates that allowed access from the paths to the gardens have been removed. Moreover in some gardens people have built storage sheds preventing people to see each other from the garden.

The pathway leads to a meeting building from Eigen Haard. Museum Het Schip (2012, p. 103) describes that the building was used as meeting room for the association, but also had a social function for the residents. All apartment complexes of Eigen Haard had their own residents association. They used the office building to organize leisure activities for children and adults. The building had yet another function. The residents used the building as storage space for when they bought bulk amounts of food to save cost. The building can therefore be regarded not only as the heart of the complex but also as the heart of the social cohesion among residents.



Figure 3.06: The portico is appropriated with chairs.



Figure 3.07: Appropriation of the semi-public space.



Figure 3.08: People making use of private benches.

3.5.3 | Appropriation of the public space

Figures 3.06 to 3.08 show more examples of Gehl's (2011, p. 113) transition spaces. The portico in between the front door and street allows for a small transition zone between in and out. This is highlighted by the appropriation of this space with chairs. Something comparable happens on the façade of the building in figure 3.07 and 3.08. People have

created an area which Sim (2019, p. 164) calls lingering zones by appropriating the space right in front of the façade with a small bench and façade gardens.





Figure 3.09: The building opening up to the street

Figure 3.10: Housing Type B

Figure 3.09 shows the entrance to four apartments. The apartments on the ground floor have their kitchen looking out onto the street as can be seen on the floorplan in figure 3.10. Gehl (2011, p. 121) mentions this sufficient openness to the street as important driver for social interaction. Moreover, the façade is directly on the street providing easy visibility from indoors to outdoors and vice versa. When people can easily see what happens on the street, they are aware if something is going on and what. Seeing what is going on will tempt people to go out and participate. More examples this openness of the building can be seen in figure 3.11.



Figure 3.11: The façade on the Zaanstraat opens up to the street with big windows cantilevering over the sidewalk.

3.6 | The design of *Het Schip*, mixing functions

The post office of *Het Schip* is situated on the Spaarndammerplantsoen as can be seen in figure 3.01. The post office served an important role in daily life for the residents of the neighborhood. It was the place where people sent and received their mail, collected their paycheck and used the telephone. Therefore the post office was a place where a lot of social interaction between neighbors took place.

4 | Spaarndammerhart (2019), fostering social cohesion in a new era

The *Spaarndammerhart* (Spaarndammerheart) is a residential complex in Amsterdam designed by Marcel Lok and KorthThielens architects with landscaping by DS Landscape. The complex is a mix of owner occupied homes and rental homes, both with and without rent-control. The complex consists of terraced houses and apartments. The terraced houses are situated on the Krommeniestraat and around a public accessible courtyard, while the apartments are situated in-between the courtyard and the Krommeniestraat (see figure 4.01). Behind the terraced houses the residents have a large communal garden in addition to a small private patio. The building was developed by Heijmans in collaboration with corporation Eigen Haard.

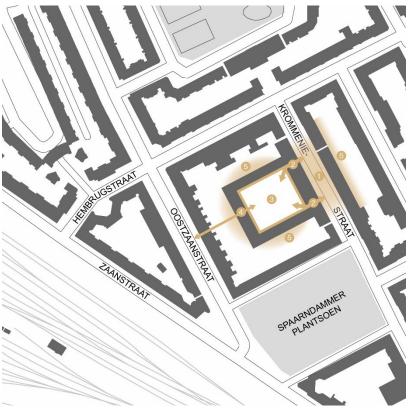


Figure 4.01: Map of the Spaarndammerbuurt neighborhood with indication of places of interest in and around the *Spaarndammerhart* (adapted from OpenStreetMap contributors, n.d.). (1) streetscape Krommeniestraat; (2) passage to Krommeniestraat; (3) courtyard; (4) passage to Oostzaanstraat; (5) inner communal gardens.

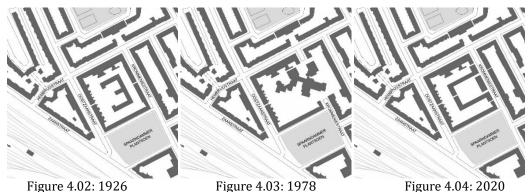
4.1 | The architects aim

Korthtielens architecten (2021) describe the project on their website as repairing the urban fabric. Their design follows the tradition of the Amsterdam School style where architecture, art and nature come together. Marcel Lok Architect. (n.d.), the other architect that worked on the project, also emphasises the importance of the transition spaces between indoor and outdoor they created. The project includes, what they call *'encroachment zones'* (ibid.) in front of the homes that serve as transition space between public and private. Residents are encouraged to appropriate these spaces.

4.2 | The design of Spaarndammerhart, integration in the city

As the architects mention on their website the project's aim was to restore the urban fabric (Marcel Lok, n.d.). The Krommiestraat has a tumultuous history for a street that is

just over a decade old. When the Spaarndammerbuurt was planned at the end of the 19th century the street connected the Hembrugstraat and the Spaarndammerplantsoen as can be seen in figure 4.02. In 1978 the part of the street was demolished to make room for a school. The passage was blocked off by the school building closing off the route, visible in figure 4.03. Currently the *Spaarndammerhart* has restored the historic urban fabric bringing back the connection of the Hembrugstraat with the Spaarndammerplantsoen (figure 4.04). Jacobs (1961/2000, p. 192) describes the importance of small city blocks to increase the interaction of people. It allow people to use a variety of routes through the neighborhood to get to their destination. Consequentially people will encounter a larger variety of other people.



(Figures 4.02-4.04 adapted from OpenStreetMap contributors, n.d.)

The project not only opens up the Krommeniestraat, but also creates a new informal route through the neighborhood. It does this by the introduction of a courtyard and three passageways that connect it to the surrounding streets (see figure 4.01). These openings in the city block allow people to cross from the Krommeniestraat to the Oostzaanstraat. Figure 4.05 shows the connection from the Oostzaanstraat to the courtyard while figure 4.06 shows it the other way around. As the architects describe in an interview with AT5 (2021) they aimed at creating a free passage. Although there is a clear visual connection, for now a fence still prevents people from using this route. Nevertheless the foundation for this to become an new passageway are made, so whenever the residents decide to remove the fence the new route can be used. Whenever the new connection will be opened up, the earlier described effect by Jacobs (1961/2000, p. 192) will be further enhanced since even more routes through the neighborhood will be available.



Figure 4.05: Passageway from Oostzaanstraat to the courtyard.



Figure 4.06: Passageway from the courtyard to Oostzaanstraat.



Figure 4.07: Passageway from Krommeniestraat to courtyard and entrance to parking garage.

The passageway (figure 4.07) from the Krommeniestraat to the courtyard is open at all times and allows people to enter the courtyard. Although the courtyard is open it is a more semi-public space, because it does not have the same public character as a street. Gehl (2011, p. 55) shows how this courtyard fosters the social cohesion among the residents by creating a more defined shared space.

4.3 | The design of Spaarndammerhart, Soft borders

4.3.1 | Appropriation of the public space

The *Spaarndammerhart* shows how transition spaces can be designed so that people appropriate the space. In figure 4.08-4.13 a multitude of examples can be seen of people appropriating the space outside their front door. The architects have created a sheltered space on the edge of the building that is subtly separated from the street by using different paving. Sim (2019, p. 164) describes the use of these spaces as a lingering zone between inside and outside. This area provides people with a space that is somewhat protected against the weather allowing a more relaxed relation between inside and outside. Gehl (2011, p. 113) describes the use of these, what he calls transition spaces, as being neither fully public nor private. He describes how these transition spaces create more opportunities to be outside. This allows people to see what is going on and interact more easily. Moreover Gehl (2011, p. 155) argues that quality seating (i.e. comfortable, good microclimate) will also extent the time people spend in the public space.



Figure 4.08: plant pots and chairs outside front door.



Figure 4.09: plants and a bench outside the front door.



Figure 4.10: Benches outside the front door and balconies protruding over the street.





Figure 4.12: Appropriation of the public space in the courtyard with bikes.



Figure 4.13: Appropriation of the public space in the courtyard with street furniture and plant pots.

4.3.2 | Possibilities for interaction

The front gardens in the courtyard of the *Spaarndammerhart* (figure 4.14) are an example of Gehl's (2011, p. 113) 'transition spaces', also seen in *Het Schip*. The spaces in between inside-outside and private-public create a space to stay outdoors and passively interact with the public space.



Figure 4.14: Front yards facing the courtyard with low barriers creating a transition space.

4.3.3 | Collectivity over private space

Besides the courtyard the terraced houses also share a communal inner garden (figure 4.01). This inner garden is an extension of the private backyard patio that the residents have. The architects have designed transition space between the public and private illustrated in figure 4.16 and 4.17. The private patios of the terraced houses can be seen in figure 4.18 and 4.19. Figure 4.19 and 4.20 make visible how the private patios transition into the collective inner garden. The architects describe the collective garden in an interview with AT5 (2021) as a space which can be defined by the residents. Sennett (2018, p. 227) describes creating an 'incomplete shell' space as a tactic for an open city. It invites people to change the space to their liking and it can be adapted over time. The residents have to work together to decide on how to use the space.

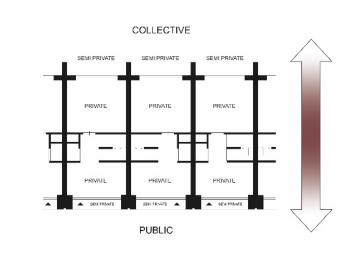


Figure 4.16: Transition spaces terraced houses Krommeniestraat

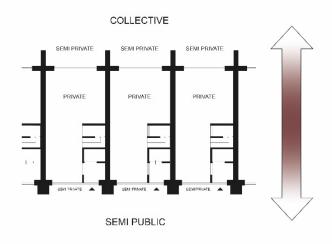


Figure 4.17: Transition spaces terraced houses courtyard.



Figure 4.18: Backyard of courtyard terraced houses. Photo 033, From "*Marcellok.nl*" by D. de Smet, 2020 (https://www.marcellok.nl/projects/spaarndammerhart). Reprinted with permission.



Figure 4.19: Backyard of Krommeniestraat terraced houses. Photo 008, From "*Marcellok.nl*" by D. de Smet, 2020 (https://www.marcellok.nl/projects/spaarndammerhart). Reprinted with permission.

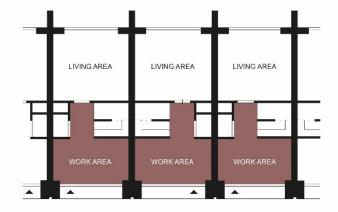


Figure 4.20: Collective backyard of courtyard terraced houses. Photo 029, From "Marcellok.nl" by D. de Smet, 2020 (https://www.marcellok.nl/projects/spaarndammerhart). Reprinted with permission.

4.4 | The design of Spaarndammerhart, mixing functions

4.4.1 | Living-working homes

The terraced houses on the Krommeniestraat have office spaces on the ground floor. Besides, the apartment complex in-between the courtyard and Krommeniestraat has commercial space on the ground floor. The importance of a mix in functions is highlighted by Jacobs (1961/2000, p. 164) arguing that to draw people to an area it needs a mix of primary uses. By mixing commercial spaces, offices and housing this is achieved.



KROMMENIETSTRAAT

Figure 4.22: Living-working home diagram.



Figure 4.23: Entrance of living working home.

5 | Conclusions

This history thesis has answered the question: What architectural design tactics to foster public life are used in Het Schip & The Spaarndammerhart? Both projects can clearly be related to the literature outlined in the research. They make extensive use of soft borders by creating transitions zones between public and private. The collective aspect is also very present in both projects. While Het Schip does this by creating a shared building, the Spaarndammerhart creates extensive shared outdoor space. The similarities in the tactics that apply show that the theories put forward by Jane Jacobs, Jan Gehl, Richard Sennett and David Sim are applicable to both buildings regardless whether they precede the literature about public life.

This research forms an addition to the existing research into the application of design tactics that foster public life. Suggestions for further research would include a broader analyses of buildings from different periods and to see how they do or do not apply the design tactics for public life. Moreover a more in-depth investigation of the cases could shed more light on effects of the design tactics identified on public life.

Bibliography

- AT5. (2021, June 8). *De Straten in de Verbinding in de Spaarndammerbuurt: "Ik ben helemaal verliefd op deze steen"* [Video]. AT5. https://www.at5.nl/artikelen/209391/de-straten-in-de-verbinding-in-de-spaarndammerbuurt-ik-ben-helemaal-verliefd-op-deze-steen
- Diemen, P. van, Heijdra, T., Koers, N., Leeden, C. van der, Pater, R., Wansing, R., Wilmering, A. M., & Roegholt, A. (2018). A work of art in brick: significance and restoration of het Schip, Amsterdam, an icon of social housing and architecture, 1919-1921. (T. Koers & A. Goldstein, Trans.). Amsterdam School Museum Het Schip.
- Frank, S. S. (1984). *Michel de Klerk, 1884-1923: An Architect of the Amsterdam School*. UMI Research Press.
- Gehl, J. (2011). *Life Between Buildings: Using Public Space* (J. Koch, Trans.). Amsterdam University Press.
- Heijdra, T., Wansing, R., Roegholt, A., Vos, R., & Museum Het Schip (Amsterdam). (2012). *Arbeiderspaleis Het Schip / druk 1: van Michel de Klerk*. Museum Het Schip.
- Jacobs, J. (2000). *The Death and Life of Great American Cities*. Pimlico. (Original work published 1962)
- Korthtielens architecten. (2021, September 24). Spaarndammerhart, Amsterdam-korthtielens architecten. korthtielens.nl. Retrieved April 7, 2023, from https://korthtielens.nl/architecture/spaarndammerschoollocatie/
- Marcel Lok Architect. (n.d.). 091 / SPAARNDAMMERHART / AMSTERDAM | MARCEL LOK_ARCHITECT. Marcellok.nl. Retrieved April 7, 2023, from https://www.marcellok.nl/projects/spaarndammerhart
- Mouratidis, K., & Poortinga, W. (2020). Built environment, urban vitality and social cohesion: Do vibrant neighborhoods foster strong communities? *Landscape and Urban Planning*, 204, 103951. https://doi.org/10.1016/j.landurbplan.2020.103951
- Museum Het Schip (Amsterdam). (2012). *Arbeiderspaleis Het Schip: van Michel de Klerk.* Museum Het Schip.

 $OpenStreetMap\ contributors\ (n.d.).\ map\ [Map].\ OpenStreetMap.$

https://www.openstreetmap.org/#map=17/52.39017/4.87387

Sennett, R. (2018). Building and Dwelling: Ethics for the City. Penguin books.

Sim, D., & Gehl, J. (foreword) (2019). *Soft City: Building Density for Everyday Life*. Island Press.

Illustrations

- Smet, D. de, (2020). Spaarndammerhart photo 008 [Photograph]. https://www.marcellok.nl/projects/spaarndammerhart
- Smet, D. de, (2020). Spaarndammerhart photo 029 [Photograph]. https://www.marcellok.nl/projects/spaarndammerhart
- Smet, D. de, (2020). Spaarndammerhart photo 033 [Photograph]. https://www.marcellok.nl/projects/spaarndammerhart