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A Reflection on the Interior Plan of Social Housing Through Dutch Expressionist Architecture: "Het Schip" by Michel de Klerk.

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ABSTRACT

The expressive design movement emerged in early Netherlands as a response to societal shifts brought about by modernization, mass production, and urban migration. Inspired by the Arts and Crafts movement, it sought to revive appreciation for skilled craftsmanship and traditional arts. Michel de Klerk, a pivotal figure in this movement, amalgamated elements from the English Arts and Crafts movement, Scandinavian vernacular, and local Dutch architecture in his works, most notably exemplified in Het Schip, a renowned social housing complex. Michel de Klerk's architectural vision encompassed both exterior and interior design, employing brick and traditional techniques to evoke a picturesque aesthetic while reflecting a mass-based expression of life. This approach was particularly crucial in addressing the dire living conditions resulting from overpopulation in mid-nineteenth century cities, as rural workers migrated to urban centers in search of employment in factories.

The culmination of these societal challenges led to the enactment of the 1901 Housing Act, which empowered housing associations, with government financing, to construct decent homes. Within this context, Het Schip stands as a significant testament to the transformative power of social housing architecture. This study delves into the profound impact of de Klerk's design philosophy on working class lives, examining how his emphasis on interior design and indoor-outdoor experiences improved the quality of life for residents. Furthermore, it contemplates the potential application of the Amsterdam School's architectural style in future social housing projects, with the aim of enhancing the well-being of lower-income families.

KEYWORDS

Expressive Design Movement, Michel de Klerk, Het Schip, Social Housing Architecture, Amsterdam School.

INTRODUCTION

The expressive design movement in the Netherlands, characterized by its profound influence on shaping human existence across all social classes, represents a pivotal era in architectural history (Koers, 2018, pp. 11). Emerging in the early 20th century, this movement departed from conventional architectural norms, emphasizing sculptural forms and material textures (Mager, 2022). Its influence extended beyond architecture to encompass various artistic domains, including interior design, furniture, and decorative arts, positioning everything requiring form as an expression of artistry within a rapidly modernizing society (Koers, 2018, pp. 11).

Against the backdrop of mass production and urbanization, the expressive design movement in the Netherlands responded to societal shifts with a renewed appreciation for skilled craftsmanship and diverse cultural influences (Roegholt, 2018, pp.7). At its forefront was Michel de Klerk, whose architectural vision epitomized the fusion of artistic expression and functional design (de Wit, 1983, pp.41). Inspired by his travels and encounters with various building traditions, de Klerk's work embodied an organically suggestive expression of life, characterized by a picturesque aesthetic and a focus on integrating interior and exterior spaces (Smith, 2005, pp. 147; Frank, 1984).

Central to de Klerk's legacy is his masterwork, Het Schip, located in Amsterdam's Spaarndammerbuurt neighborhood, standing as a testament to architecture's transformative potential in addressing social

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inequities (Roegholt et al., 2012). As cities grappled with overpopulation and inadequate housing conditions in the mid-19th century, Het Schip emerged as a beacon of hope, providing not only quality accommodation but also a sense of dignity and beauty to its working-class residents (Diemen, 2018, pp.59).

> *The complex was a response to the dreadful housing conditions in the nineteenth-century Netherlands when factories were built in the cities at a high rate. To achieve maximum output, they needed many workers. Many of them arrived from the rural countryside, where life was unpredictable – a bad summer called for no harvest. The factory seemed to preclude chance. Every day one went to work. Everyday production occurred according to a fixed plan. The rural communities died. Windmills disappeared, as did farms with their barns and haystacks. The country was changing. It was time for a goodbye. Goodbye to rural life* (Roegholt, 2018, pp.7). *However, work in the factories was hard and there was a shortage of decent homes. Many had to live in slums, hovels, and sometimes in cellars, half underground, with prevalent diseases and sickness. The 1901 Housing Act attempted to address this and enabled housing associations to build good homes in great numbers. Government loans financed the efforts of these self-organizing cooperatives* (Roegholt, 2018, pp.7).

This study offers a comprehensive analysis of the significance of social housing architecture in the Netherlands, with a particular focus on Michel de Klerk's 'Het Schip' in Amsterdam's 'Spaarndammerbuurt' neighborhood. Its aim is to understand how architecture, especially de Klerk's expressionist style, enhances the well-being of lower-income families. The study explores the incorporation of artistic principles in working class housing design and investigates how de Klerk's style positively affected social housing residents, particularly in interior spaces. Additionally, it examines the potential of integrating the Amsterdam School style into social housing projects to improve the well-being of disadvantaged families. Situating itself within the historical context of the expressive design movement, the research considers influences such as modernization and urban migration. It delves into the societal implications of de Klerk's architectural principles, including their response to dire living conditions in the mid-nineteenth century. Employing a multidisciplinary approach and drawing insights from architectural history, social studies, and urban planning literature, the study relies on extensive archival research to contextualize social housing development. Moreover, it incorporates perspectives from architecture and urban studies experts to elucidate the significance of de Klerk's principles and their impact on social and economic dynamics. Ultimately, the research aims to provide a comprehensive understanding of how architectural innovation intersects with social reform to benefit marginalized communities in the urban landscape of the Netherlands.

SOCIAL HOUSING AND ORGANIZATIONAL STRUCTURES IN THE NETHERLANDS

Around 1900, Amsterdam witnessed two significant discussions, one concerning social hygiene and the other regarding aesthetics (Diemen, 2018, pp. 59; Stieber, 1998, pp.11). While there was broad consensus on the importance of social hygiene, differing views emerged on aesthetics. Liberal and social politicians advocated for minimum standards, while religious reformers strove for excellence (Diemen, 2018, pp. 59; Stieber, 1998, pp.87).

> *In the mid-nineteenth century, overpopulation in cities made it clear that many working-class homes were unsuitable for living* (Fig. 1). *The living conditions of workers and those without means kept deteriorating, and the various philanthropic institutions could not keep up with the onrush of the needy.* (Diemen, 2018, pp.59)

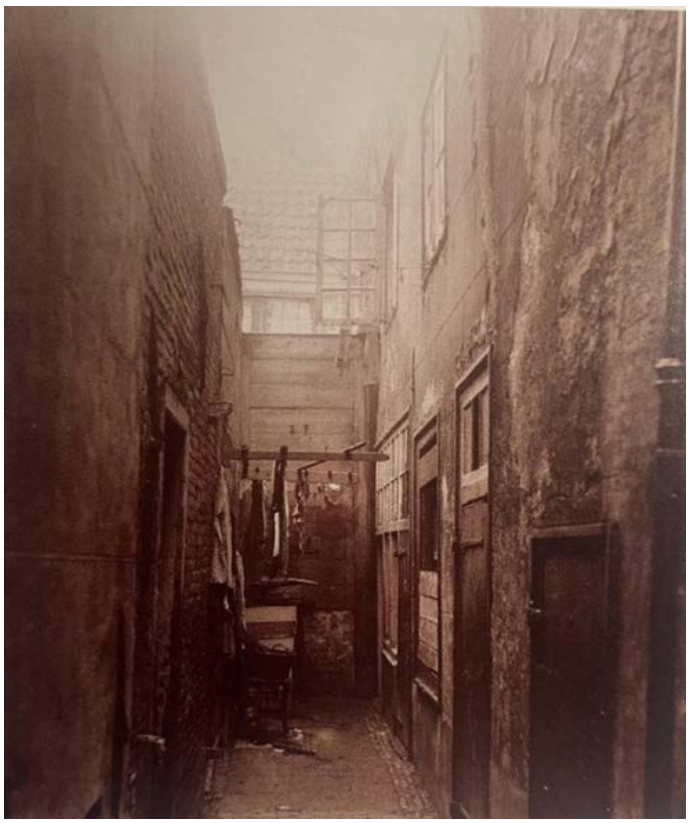

Figure 1. *Foeliedwarsstraat 20-22, 1899. Source: Diemen, 2018, pp. 60.*

At the request of King William III, a report by the Royal Institute of Engineers was presented in 1853, which raised the requirements and minimal needs for the working class homes (Diemen 2018, pp.61; See Amsterdam, 1983, pp.35). To address this, a report in 1853, prompted by King William III, outlined minimal housing requirements. The 1854 Dutch Congress on Poverty identified alcoholism, immorality, and unemployment as causes of poverty, prompting efforts to improve living conditions through housing, schools, bathhouses, and water towers (Diemen, 2018, pp. 61).

As the wealthier segment of the population became more aware of the epidemic dangers to their own health, social conscience grew, and employers began to realize that workers would perform better when they were healthy and content (Diemen, 2018, p.59).

> *Proposed regulations for interiors included previously unconsidered measures, such as the requirement for each dwelling to have its own private toilet. A small hallway was introduced to separate public and family life, while communal accommodations were avoided, and separate bedrooms were deemed desirable* (Schade, 1981, pp. 9).

Significant changes occurred following the introduction of the Housing Act, which prohibited dwellings without direct outside air access and eliminated back-to-back housing due to poor ventilation (Seng, 1974, pp.13). Consequently, dwellings without direct access to outside air were no longer allowed, and houses built back-to-back were eliminated due to inadequate ventilation.

Figure 2. *Lindengracht 214, half of a double bed box with closet. An inspector takes notes. Source: Diemen, 2018, pp. 60.*

In 1901, the Government published a Guidebook (Fig. 2), which could be used as a basis to guide (but not enforce) development. This document outlined requirements regarding the minimum dimensions of the entire dwelling (30 m^2), specifying a living room of at least 12 m^2 and one toilet per dwelling, with access to outside air. *For every three inhabitants there had to be at least one bed or other sleeping arrangements, although alcoves were discouraged for a small dwelling* (Bergevelt et al., 1975, pp.298). *Decency was also covered in the requirements. There had to be at least three bedrooms, one for the parents, one for the boys, and one for the girls* (Diemen, 2018, pp.61).

In conclusion, the discourse on social hygiene and aesthetics in Amsterdam around 1900 led to significant developments in housing policy and design. While there was broad consensus on the need for improved living conditions for the working class, debates arose regarding housing standards, with differing views on minimum standards versus striving for excellence. Efforts to address inadequate housing conditions gained momentum with reports highlighting the need for minimal housing requirements and initiatives to combat poverty through improved living conditions. The enactment of housing regulations, such as those prohibiting dwellings without direct outside air access and eliminating back-to-back housing, marked significant progress in improving housing quality for the working class. Furthermore, the government's publication of a guidebook outlining minimum dwelling dimensions and decency requirements further contributed to the enhancement of housing standards in the Netherlands. These developments reflected a growing social conscience and recognition among employers of the importance of having healthy and content workers, ultimately shaping the trajectory of social housing and organizational structures in the country.

DUTCH EXPRESSIONIST ARCHITECTURE: THE AMSTERDAM SCHOOL

The term "Amsterdam School" was first coined by Jan Gratama in his contribution to a monograph published on the occasion of Berlage's 60th birthday, where he described the architects of the new movement as "... the newest movement in building art: the modern Amsterdam School, with its expressionism, its modern romanticism, and its fantasy" (Gratama, 1916, pp. 50).

Amidst political shifts and industrialization, the sense of living in chaos became increasingly palpable. Around 1900, artists felt a pressing need to establish their identity and define the distinctiveness of their era. This led to a departure from the continuity with the past that characterized nineteenth century architects, giving rise to various groups of architects, each with their own vision of architectural aesthetics (Diemen, 2018, pp.63).

> *In the Netherlands, the Nieuwe Kunst (the Dutch equivalent to Art Nouveau) and the Amsterdam School were considered an alternative to the nineteenth century neo-styles. The Nieuwe Kunst was based on art nouveau and Jugendstil, but as a simplified variant. The Amsterdam School can be considered a corollary to the Nieuwe Kunst, but the buildings were much more expressive* (Diemen, 2018, pp.63).

The characteristics of this style are the decorative use of bricks and imaginative, expressive, and asymmetrical design (Mager, 2022).

> *Whereas mainly square blocks were erected before, special elegant corners now occurred frequently. The internal structure usually consisted of concrete, often clad with bricks, built in an unnatural manner: not square, but undulating and uniquely shaped. The whimsical designs would have been practically impossible without modern construction methods. The architects of the Amsterdam School were often blamed for just designing facades of buildings, paying attention only to the exterior. The architects are not the only ones to blame for this. Designs had to conform the requirements of the Woningdienst. This agency provided dwelling types and floor plans to the housing industry. Architects were then commissioned to design the exterior; the floor plan simply did not form part of the design assignment* (Diemen, 2018, pp.63).

The Amsterdam School era marked a significant shift from traditional square blocks to the incorporation of special, elegant corners, made feasible by modern construction techniques. While architects of this movement faced criticism for allegedly prioritizing exterior design over practicality, it is essential to recognize that they operated within a framework dictated by agencies like the Woningdienst. These agencies often prescribed dwelling types and floor plans, leaving architects to focus primarily on the building's facade. Thus, the limitations imposed by external factors played a significant role in shaping the architectural landscape of the Amsterdam School period.

> *Inspiration was mostly obtained from nature, for instance, shells and crystals, as was the case with the Nieuwe Kunst. Furthermore, there was influence from Eastern art and exotic folklore. Eventually, the Amsterdam School invoked opposition from the world of architecture. The unnatural, imaginative use of brick and the emphasis on the exterior were especially rejected* (Diemen, 2018, pp.63).

> *The use of materials and colors is an important element of architecture. For the architects of the Amsterdam School color meant expression. We can see this in the colors they use in the*

> *interior or in the facade design by using different types of material. Color was used to impart an extra dimension to a design. It was a special artistic addition by the architect. By using for example bright colors, they formed an inseparable unity with the design* (Diemen, 2018, pp. 137).

Amidst political and industrial changes around 1900, artists sought to establish their identity, leading to a departure from past architectural norms. The Amsterdam School emerged as an alternative to 19th-century neo-styles, emphasizing decorative brick usage and imaginative, asymmetrical designs. While the movement faced criticism for its focus on exterior aesthetics, it drew inspiration from nature, Eastern art, and folklore. Color played a crucial role, serving as an expressive medium in both interior and exterior design. As a result, the Amsterdam School style highly focused on symbolism, aesthetics, plasticity, and rich decoration. The intention was that the architecture presented a divided unity, where all the small pieces come together in its massing to form a whole. The interior and exterior of a building were of equal importance to the architects of the movement. They wished to design a complete building and not just an attractive facade. This representation embodied the solidarity of the working class movement at the time, where individuals came together for the betterment of society.

THE AMSTERDAM SCHOOL AND SOCIAL HOUSING IN AMSTERDAM

> *Through expressionist designs, the Amsterdam School aimed to build an architecture that demonstrated "unity in plurality". They held a vision for a society where "all would be equal and in which art could flourish," and believed that the development of a great society must be paired with great art* (Rovinelli, 1984, pp. 257).

The most important positions in the Building and Housing Agency, the Municipal Housing Agency, and the Department of Buildings and Public Works were occupied by sympathizers of the Amsterdam School. Therefore, the Amsterdam School became the "city style" of Amsterdam (Diemen, 2018, pp. 66). The Amsterdam School thus flourished in the public housing sector, as the emergence of the style simultaneously occurred with the need for reform in the urban identity of public housing.

Not all architects had contributed to debate on living conditions for the working class because of the limited budgets. It is often argued that the architects of the Amsterdam School did not account for the habits of future residents. According to Vriend, this was because they were afraid that practical requirements would jeopardize their artistry. He also claimed that they would be only semi-engaged with social and economic issues (Vriend, 1970, pp. 13).

> *The articles that were published gave the impression of a somewhat free-floating idealism. The idea of the perfect society herein was an important component as well. This idealized world would only materialize as a result of social upheaval, which would automatically bring about a new art. Many architects of the Amsterdam School had socialistic or anarchistic sympathies, as well as an interest in spiritual movements such as theosophy and religion* (Frank, 1971, pp.57).

> *They also shared a belief in the Dutch neutrality during the First World War and wanted to support that by means of utopian projects dedicated to peace* (Frank, 1971, pp.57-59, 63). *The idea of educating the worker by means of building projects also resonated clearly. The architect knew how to create beauty, and this beauty was considered socially uplifting* (Bergelt et al. 1975, pp. 9).

> *The worker received beauty as never before. This was demonstrated by a remark made by a resident of The Ship in a tv documentary Een droom van Baksteen in 1975, "In the evening we walked across the bridge and saw it. In the moonlight, you saw a fairy tale. Then we told each other: you are the castellan, and I am the princess."* (Bergevelt et al. 1975, note 2).

For the working class, these architectural endeavors represented newfound beauty and societal elevation. However, initial reactions among residents to the Housing Act's regulated brightness and ventilation were mixed, with some feeling uncomfortable and missing familiar alcoves (Grinberg, 1977, pp. 30). As an example, the kitchen was made smaller, such that the family would not live there, but in the living room. The Amsterdam School architects had specific ideas about what benefited the workers and sometimes even proposed the furnishings (Diemen, 2018, pp. 66).

> J.P. Mieras wrote about this in 1921, *"They were taught where to place their table, where to hang their lamp and where to put their bed. And to teach the disobedient a lesson, the window was located in the corner, such that the table would not end up in the middle of the room, the lamp hook was installed off-center, such that the lamp would not hang in the center of the room, and the bed was hammered solidly in a corner of the room, such that he could enjoy his eight hourly sleep here and not where he would have wished to."* (Mieras, 1923, pp. 161).

In conclusion, the Amsterdam School of architecture embodied a vision of societal equality and artistic excellence, aiming to create architecture that reflected "unity in plurality." With sympathetic figures occupying key positions in Amsterdam's housing agencies, the Amsterdam School became synonymous with the city's architectural identity, particularly in the public housing sector. While some critics argued that the architects prioritized artistic expression over practical considerations for future residents, others saw their work as a manifestation of idealistic visions for a better society. Many architects of the Amsterdam School held socialist or anarchist beliefs and were inspired by spiritual movements like theosophy, seeking to uplift society through their architectural endeavors. Despite initial mixed reactions from residents to regulated living conditions under the Housing Act, the Amsterdam School architects believed in guiding workers to appreciate newfound beauty and societal elevation through carefully considered design choices, even down to the placement of furniture. Ultimately, the Amsterdam School's architectural legacy stands as a testament to its commitment to social upliftment and the pursuit of an idealized society through art and architecture.

MICHEL DE KLERK

The emergence of the Amsterdam School of architecture, with its emphasis on societal equality and artistic excellence, was closely intertwined with the ongoing discourse on social hygiene and aesthetics in Amsterdam around 1900. As regulatory measures and policy interventions sought to address the pressing need for improved living conditions for the working class, influential figures lent their support to the movement, including prominent architect Michel de Klerk. Despite criticisms about practicality versus artistic expression, architects of the Amsterdam School, like de Klerk, aimed to uplift society through their designs, viewing architecture as a means to reflect unity amidst diversity. Michel de Klerk, in particular, expressed his architectural philosophy through his buildings, leveraging his remarkable drawing skills and early apprenticeship to leave behind a legacy of architectural innovation and social upliftment.

Michel de Klerk, the prominent figure of the Amsterdam School, primarily expressed his architectural philosophy through his buildings rather than extensive writings. Born in an Amsterdam suburb in 1884, de Klerk displayed remarkable drawing skills from an early age. His journey into architecture began

when architect Eduard Cuypers noticed his drawings during a school visit at the age of fourteen. Michel de Klerk then embarked on a twelve-year tenure in Cuypers' office (Fig. 3), starting as a clerk, advancing to a draughtsman, and eventually overseeing ongoing projects. His debut as an independent architect came when he was commissioned by H. A. J. Baanders to design the Johannes Vermeerplein apartment house (Smith, 2005, pp. 147: Frank, 1984). Subsequently, he received an opportunity to design the initial block on the Spaarndammerplantsoen, marking the inception of his own architectural practice.

Figure 3. *Young Michel de Klerk in Eduard Cuypers' office in 1906. De Klerk is in the last row. Third at left is Joan van der Meij. On the right stands Piet Kramer. Sitting in the middle is Ed. Cuypers. Source: Heijdra, 2018, pp. 20.*

> *The workers' housing, Spaarndammerbuurt, was tremendously influenced by the building codes for housing in Amsterdam at the time. Wolfgang Pehnt describes de Klerk's solution for the apartment building as basically the design of façades (1973). Over the next few years, de Klerk was involved with the design of the remaining two blocks, each with a slightly different approach. With windows flush to the façade, he employed various brick patterns; vertical to meet the street (and to demarcate the stories on the third block), horizontal string courses, some set-in wave patterns, and others pulled away from the façade to articulate entrances.* (Smith, 2005, pp. 147)

HOUSING BLOCKS AT SPAARNDAMMERPLANTSOEN

Michel de Klerk's significant breakthrough occurred with his housing blocks in Amsterdam-West. In 1912, the Public Works department commissioned architect Jo van der Meij to devise an urban development plan for the yet undeveloped area of Spaarndammerplantsoen. The result was the creation of three distinctive housing blocks (Fig. 4) by Michel de Klerk: the purple block (1914), the yellow block (1918), and the orange block (1921), collectively known as 'Het Schip,' which stands as an exceptional ensemble showcasing the evolution of the Amsterdam School architectural style.

Figure 4. *Urban plan for Northern part of Spaarndammerbuurt by J. M. van der Meij, 1912-1914. Top right the three urban blocks by Michel de Klerk. Source: Koers, 2018, pp. 14.*

It is evident that de Klerk aimed to achieve a defined appearance through his choice of materials. The materials support the design, with windows, doors, and their frames emphasized without dominating the overall composition. The material properties of these elements play a crucial role in determining the aesthetic outcome. In the three housing blocks at Spaarndammerplantsoen, the colors of the various bricks, roof tiles, and ceramic components are the most significant factors in determining the overall appearance and color palette.

The First 'Purple' Block

The first 'purple' block is characterized by its diverse brick patterns, incorporating unexpected elements such as wood, ironwork, and ceramics (Fig. 5) (Diemen, 2018, pp. 67-70).

> *De Klerk lavished much attention on the stairwells, which feature sensual shapes, small windows, and parabolic-shaped gables, imbuing them with almost human appearance. The wooden doors were grouped and elaborately decorated, enhancing the experience of entry. Even the rear facades received careful attention, something that was highly unusual for private builders. The interior plans of the dwellings were highly unusual, with a large kitchen where the family could eat their meals and a bedroom large enough for daytime use. Both corners of the block had shops with large windowsills where residents could sit down for a chat. Here too, De Klerk had probably been inspired by the small North Holland villages where 'chat corners' were quite common* (Roegholt et al., 2012, pp. 58-60).

Figure 5. *M. de Klerk, presentation aquarel for the first (purple) block at Spaarndammerplantsoen. Source: Heijdra, 2018, pp. 22.*

The Second 'Yellow' Block

Michel de Klerk was also asked to design the other side of Spaarndammerplantsoen (Fig. 6). *However, World War One had broken out and although the Netherlands remained neutral it nevertheless felt its effects. Building materials became scarce and expensive, builders were mobilized, and tenants could no longer afford the rents for newly built houses* (Roegholt et al., 2012, pp. 65-68). As a result, not all requests of Michel de Klerk could be met. While he had to make some changes to his design, he remained uncompromising in his pursuit of beauty and quality. Despite the challenges, the committee members recognized the importance of giving the new architectural movement a fair chance and ultimately approved de Klerk's design (Roegholt et al., 2012, pp. 65-68).

Figure 6. *M. de Klerk, presentation aquarel for the second (yellow) block at Spaarndammerplantsoen. Source: Heijdra, 2018, pp. 22.*

THE THIRD BLOCK 'HET SCHIP'

In late 1916, de Klerk was tasked by Eigen Haard to design the third block of houses at Spaarndammerplantsoen (Fig. 7), targeting the more affluent members of the middle class. This

commission not only recognized de Klerk's previous work but also provided him with an opportunity to showcase his skills. The third block, which is the largest of the three and most intricate in its spatial interworkings, occupies the site bordered by the Oostzaan-, Zaan-, and Hembrugstraat, and the northwest corner of the plantsoen. It sits on a largely unbuilt triangular site available for development. The building deviated from the other two blocks in almost all respects, which is emphasized by another remark of Piet Kramer, *"He dedicated himself to each new commission, reviewed his work from all aspects, lived through it as if he had forgotten all his previous work"* (Fig. 8) (Wendingen, 1924, pp.3).

Figure 7. *Presentation aquarel Het Schip. Source: Heijdra, 2018, pp. 26-27.*

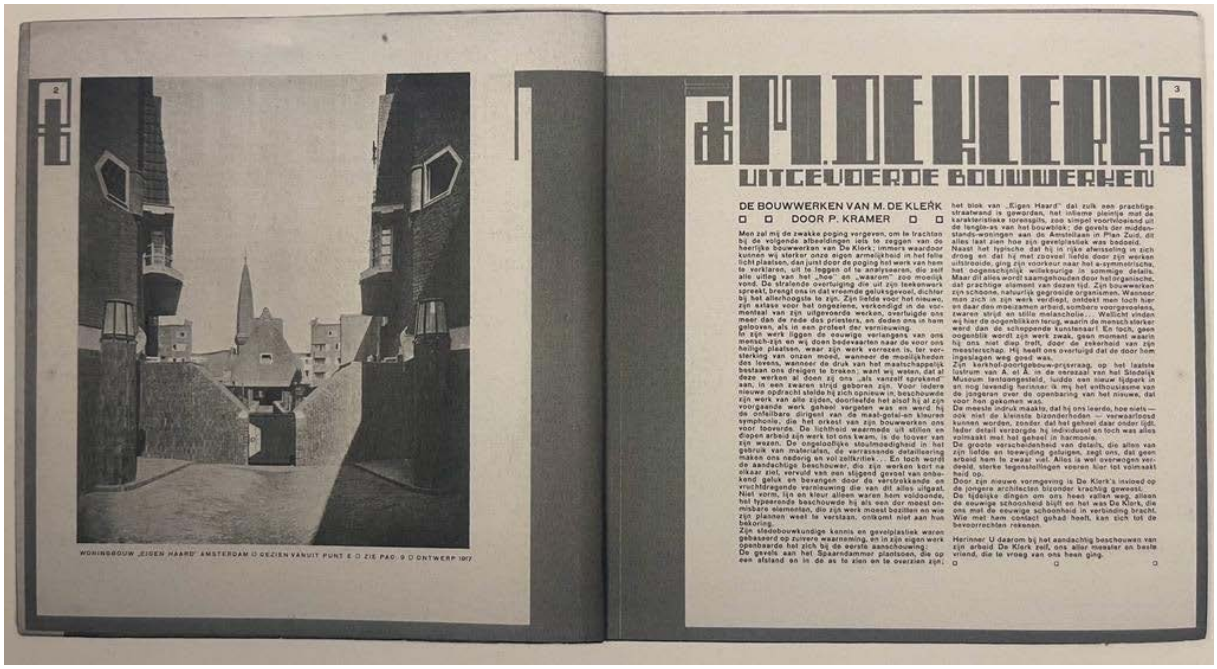

Figure 8. *Wendingen magazine on the completed works by Michel de Klerk. Source: Heijdra, 2018, pp. 30.*

Bricklayers working on the buildings had the time of their lives. *The materials for The Ship have been chosen by De Klerk and consist of orange Groninger bricks and black Groninger clinkers with a fitting, ochre yellow and black joint, orange and black roof tiles, and ceramic elements in a mostly orange color scheme. The window arrangements are in a light color scheme and the doors are green with light accents* (Diemen, 2018, pp.139).

In contrast to the Shipping House, which boasted a load-bearing concrete frame, The Ship had a different architectural approach. Concrete and concrete-steel elements were sparingly incorporated, primarily in the basement, stairways, and veranda/balcony floors. Instead, the building predominantly featured bricks and wooden beams. The bricks served a dual purpose by providing structural support and adding aesthetic charm, much like the roof tiles (Roegholt et al., 2012, pp. 69-71).

Figure 9. *M. de Klerk, sketch for the façade of Het Schip; in the middle of the existing school. Source: Heijdra, 2018, pp. 90.*

Situated on a challenging triangular plot and incorporating an existing kindergarten previously constructed by Public Works on Oostzaanstraat presented a significant challenge, but de Klerk's ingenuity prevailed, as we will see further in the description. Michel de Klerk was not tasked with rebuilding or extending the school situated within his work area (Fig. 9). This school belonged to the municipality and did not require expansion at the time. Despite this, de Klerk had conceptualizations regarding it. In order to soften the stark contrast between his complex and the markedly different appearance of the school, he devised two rounded protrusions on either side, gracefully wrapping around the bulk of the school building (Diemen, 2018, pp.70).

Michel de Klerk's housing blocks at Spaarndammerplantsoen represent a significant milestone in the evolution of urban architecture. Each block, reflects de Klerk's commitment to creating not just buildings but vibrant communities. The thoughtful integration of elements such as shops, communal spaces, and private gardens fostered a sense of belonging and community cohesion. Het Schip was characterized by a lot of surprising details such as the organic-iconographic decorations which remind us of sea creatures, jellyfish, and shells. An illustrative instance of this is the small jellyfish or mushroom-shaped sculpture positioned beneath the corner balcony beside the tower at Spaarndammerplantsoen. Het Schip stands as a testament to Michel de Klerk's architectural genius, exemplifying his ability to harmonize aesthetic beauty with functional design while prioritizing the well-being of its inhabitants.

Michel de Klerk's vision extended beyond mere facade embellishment; nearly all of his sketches included floor plans. The complex was meticulously divided into several key components, the corner overlooking Spaarndammerplantsoen, housing the post office; the integration with the existing school; and the quaint plaza adorned with a steeple on Hembrugstraat. Unlike his prior projects, this undertaking required extensive consideration of the surrounding environment, a challenge de Klerk adeptly met, crafting an unparalleled architectural marvel. He prioritized the residents' comfort, envisioning a palace for the working classes.

Developing The Floor Plan

Het Schip is renowned for its meticulous attention to floor plans, providing spacious homes with distinctive features such as special windows or turrets, setting it apart from many other Amsterdam School designs. It stands as a highlight of both public housing and the Amsterdam School style, showcasing de Klerk's talent for playful shapes and innovative design.

> *The Municipal Housing Authority and the architects of the housing blocks in Amsterdam wanted to improve workers' housing through the floor plan* (Grünhagen, 1992). *When Amsterdam's working class lived in inner-city slums, entire families inhabited one room. There was no proper toilet or water supply, and air circulation. Members of the households would sleep in bed alcoves, built into the wall* (Shymanski, 2019, pp. 6).

> *During the implementation of Woningwet in 1901, this sleeping arrangement was banned after it was identified as the main cause of tuberculosis. The elimination of bed alcoves and the inclusion of toilets and water supplies promoted healthy hygiene. At that time, Amsterdam's largest workers' housing apartments were featured. The new houses represented a significant improvement in housing conditions then in comparison to the slum houses these workers were originally living in* (Shymanski, 2019, pp. 6).

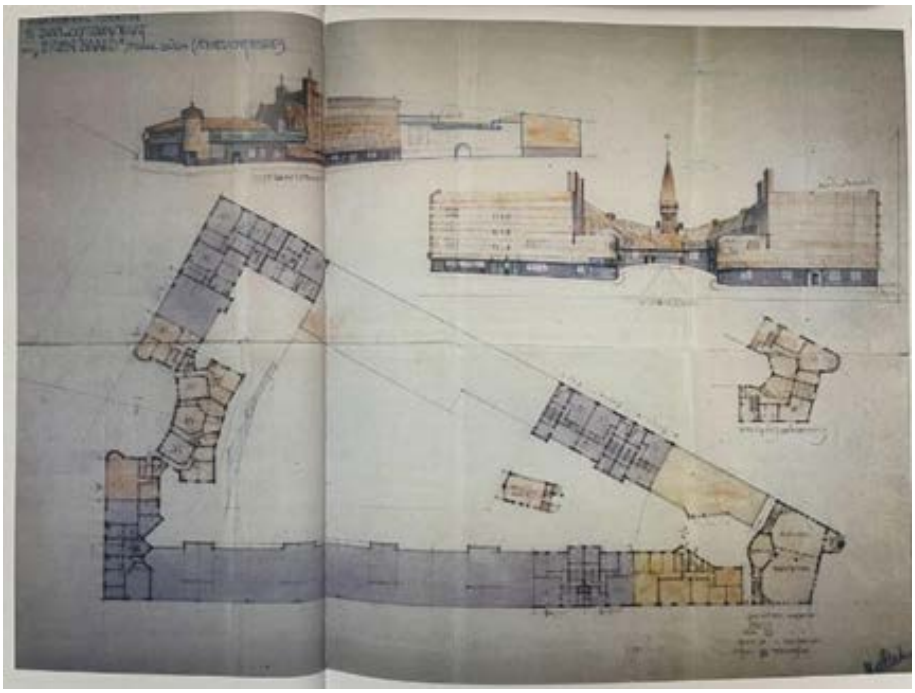

Figure 10. *M. de Klerk, plan Het Schip, the third (orange or red) block at Spaarndammerplantsoen, with details. Source: Heijdra, 2018, pp. 24-25.*

Michel de Klerk began by giving each apartment as much light and outside space as possible, while conforming the requirements of the housing society. Each room in the new blocks has a window, as air circulation and daylight are important and improve the quality of life. The interior conditions were largely prescribed by the Woningwet, but with his unique design skill de Klerk found ways to architecturally translate the exterior to the interior (Fig. 10). He was very particular about the design of his windows. Not only attention on the shapes but also to the arrangement of the glazing bars. The outwardly protruding windows at the folds of the 'bow', for example, have vertical bars while some of the small stairwell windows consist of diagonally placed bars (Roegholt et al., 2012, pp. 91). This not only emphasized Michel's expressionist approach in the design of the facade, but also created an

impressive visual effect in the interior of the building. The arrangement of windows with different shapes and glazing bar patterns would likely create intriguing patterns of light and shadow within the rooms. The contrast between the vertical bars on the outwardly protruding windows and the diagonally placed bars on the small stairwell windows add visual interest and depth to the interior spaces, enhancing the overall ambiance and character of the building.

In the plan of the appartements, the L type house shown in the figure, activities within the house were distinctly partitioned (Fig. 11: Type L apartments). The kitchen and the living room are separated from each other. This division contributes to an enhanced quality of life within the household. Various housing blocks have been diversified to cater to individual needs, considering factors such as family size or financial circumstance (Shymanski, 2019, pp. 6-8).

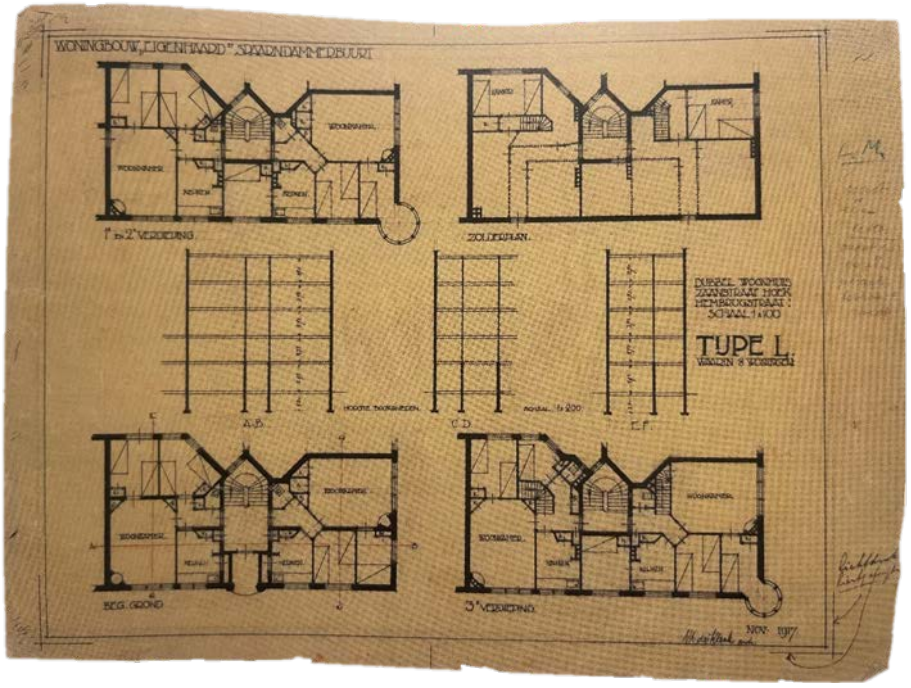

Figure 11. *M. de Klerk, floorplan residence type L, November 1917. Source: Diemen & Heijdra, 2018, pp. 253.*

Michel de Klerk realized that equalizing the number of floors would create dark interiors, so he prioritized allowing daylight into the kindergarten playground and residents' gardens. Hence, the southern section was kept low-rise, accommodating the post office. Designing usable floor plans for eight irregularly shaped apartments posed a unique challenge, but de Klerk's expertise simplified the process. Adjacent to the school's playground, Eigen Haard commissioned a meeting room, also designed by de Klerk, with a passage created for accessibility from Oostzaanstraat next to the post office.

Post Office

Michel de Klerk oversaw every aspect of the post office, including both its exterior and interior. From the gracefully curved ceiling to the exquisite tiles and the remarkable iron brick floor, every element of the post office was conceived and crafted by de Klerk himself (Fig. 12). The floor plan reveals a pentagonal shape, accommodating an entrance area, public space, office quarters, and a mail sorting room. The reception counter, adorned with intricate wood carvings and decorative forged steel, served as an elegant divider between the public area and the workspace (Diemen, 2018, pp. 82-83).

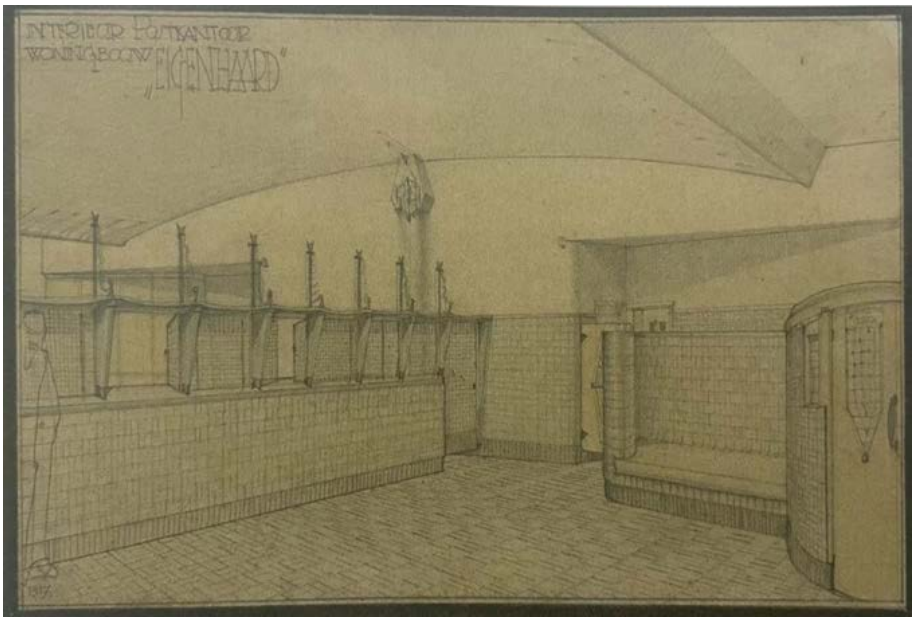

Figure 12. *De Klerk, design post office interior. Source: Diemen, 2018, pp. 143.*

The use of a telephone was not a general commodity in the 1920's. Instead, one would go to the post office. For that purpose, De Klerk designed a "call booth" (Fig. 13) *in the public space. For privacy, the booth was outfitted with a double curved door with double glazing. In the door of the booth, a stained-glass window was installed, shaped in the same curvature as the door.* (Diemen, 2018, pp. 83)

Figure 13. *View from post office desk towards the waiting bench and speaking booth; The waiting bench is also designed by Michel de Klerk. Source: Roegholt et al., 2012, pp.94.*

The interior boasts a carefully chosen color scheme, with lavender blue tiles in the visitor's section lending it a distinctive and monumental character. Jugendstil influences are evident in both the upper sections of the counters – partly made of wrought iron – and in the door hinges. Even the descriptive signs in the post office bear de Klerk's design for their letters (Roegholt et al., 2012, pp. 92)

Michel de Klerk's meticulous attention to detail and innovative design approach are evident throughout the post office, from its exterior to its interior. His foresight in addressing the community's practical

needs, exemplified by the design of the "call booth," along with the thoughtful color scheme and incorporation of Jugendstil influences, further enrich the post office's distinctive character.

The Inner Court

Behind the post office, Michel de Klerk fashioned an elongated, parabolically shaped archway that serves as the entry point to a secluded inner court. This court, reminiscent of medieval European courtyards like the Begijnhof but on a smaller scale and featuring contemporary spatial design, accommodated only ten residences, each with its distinctive architectural style. Some dwellings boasted bay windows extending over private gardens, while opaline glass lamps atop two pillars cast a captivating glow after nightfall. The square itself was paved in a compass pattern using vibrant yellow Ijssel clinkers. What truly sets this court apart is its transformative effect on those who pass through its archway, transporting them to a serene realm where the frenetic pace of everyday life recedes into the background (Roegholt et al., 2012, pp. 96-101).

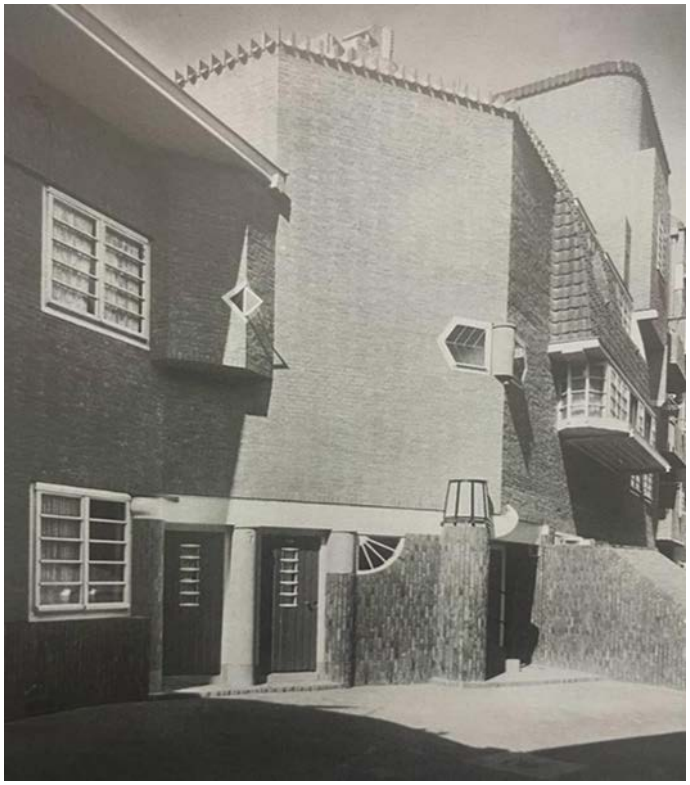

Figure 14. *The inner courtyard of The Ship, circa 1924. Source: Roegholt et al., 2012, pp.101.*

Meeting Hall

In the inner courtyard (Fig. 14), de Klerk designed small structures for private gardens alongside a larger meeting hall, accessible via a narrow pathway. Built concurrently with the rest of The Ship, the meeting hall seamlessly integrates with the main building and is even organically connected to it by a small wall that runs along the residents' gardens.

Functioning as a venue for the housing corporation's board consultations and resident-organized activities, the meeting hall was ingeniously designed by de Klerk to accommodate various uses within its limited space. During consultation hours, residents could wait in a small waiting area furnished with benches. Despite its modest size, the meeting room boasts a high wooden ceiling and large beams, creating a spacious ambiance. (Roegholt et al., 2012, pp. 101-102)

Michel de Klerk's design of the meeting hall exemplifies his thoughtful approach to urban architecture. Integrated harmoniously with its surroundings, the hall maximizes functionality within its confined space, serving as a versatile hub for administrative and community activities. Its unassuming size belies its grandeur, with the high wooden ceiling and expansive beams contributing to an atmosphere of openness and sophistication, thereby enhancing the overall user experience.

Michel de Klerk's architectural masterpiece, Het Schip, epitomizes the progressive vision of improving workers' housing conditions while embracing the distinctive style of the Amsterdam School. Through meticulous attention to floor plans, de Klerk prioritized light, air circulation, and functional division of spaces, revolutionizing the living standards of Amsterdam's working class. From the graceful curves of the post office to the serene inner court and versatile meeting hall, every detail reflects de Klerk's innovative design ethos and commitment to community well-being. Het Schip stands as a testament to the transformative power of architecture, creating not just homes but vibrant spaces that enrich the lives of its residents and visitors alike.

CONCLUSION

The emergence of urbanization post the industrial revolution precipitated a mass migration from rural to urban areas, posing novel challenges for urban populations, particularly the urban poor. In response, policies were enacted to address the needs of this vulnerable segment of society. Architects associated with the Amsterdam School championed progressive ideals focused on enhancing the well-being of the working class and fostering their happiness through innovative housing design. Supported by the Netherlands government and the Municipal Housing Authority, this vision aimed to create homes tailored to their residents, resulting in a distinctive architecture reflecting the identity of its inhabitants and providing a welcoming haven for the working class. The Amsterdam School prioritized aesthetics and comfort for working class individuals, recognizing their right to well-designed living spaces created by artists. These architects envisioned "working class palaces," where an aesthetically pleasing environment was believed to positively impact personal development and residents' happiness.

Michel de Klerk's 'Het Schip' exemplifies this expressionist architectural style through its organic integration of diverse forms, rich material palette, and ornamental detailing, rejecting standardized designs in favor of individualized expression. By promoting unity and collectivity within interior spaces, de Klerk sought to elevate the living standards of the working class, ensuring that each home met essential requirements while maximizing light and outdoor space. Through meticulous attention to spatial layout and architectural detail, de Klerk transcended the limitations of workers' housing, creating a model of quality social housing that merged art with functionality to enrich the urban living environment.

The research offers a comprehensive analysis of the expressive design movement in the Netherlands, focusing on Michel de Klerk's masterpiece, Het Schip. This movement, emerging in the early 20th century, departed from traditional architectural norms, emphasizing artistry and functionality. Het Schip, amidst urbanization challenges, became a symbol of hope, offering quality housing to the working class. Through interdisciplinary analysis, the study explores how de Klerk's expressionist style enriched the lives of lower-income families and drove social reform. Supported by government initiatives, de Klerk's vision prioritized aesthetics and comfort, creating a model of social housing that merged art with functionality.

This study reflects on the interior plan of social housing through an interdisciplinary analysis, shedding light on how architectural innovation intersected with social reform, benefiting marginalized

communities in the urban landscape of the Netherlands. It provides insights into the historical context of the expressive design movement in the Netherlands, emphasizing its departure from traditional architectural norms and its response to societal shifts amidst urbanization challenges. It explores the evolution of social housing in the Netherlands, highlighting efforts to address inadequate living conditions for the working class through regulatory measures and policy interventions. Ultimately, the research underscores architecture's transformative potential in shaping society and urban landscapes for the betterment of all.

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CONFLICT OF INTEREST

The author declares that there is not any conflict of interest about this paper.

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