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Persoonshaven Urban Housing, Rotterdam

Viviendas urbanas en Persoonshaven, Róterdam

Habitação urbana Persoonshaven, Roterdão

Abstract | **Resumen** | **Resumo**

The social housing project at Persoonshaven in the Feijenoord district of Rotterdam in the Netherlands provides an adaptation of a common late 19th-century speculative house type. The changes in its appearance, spatial organization, details and structure result from standardized contemporary Dutch construction techniques and current regulations and spatial standards. The house types and building methods will be described in the context of Martin Steinmann's characterization of traditionalist design as practiced by the Danish architect Kay Fisker.

El proyecto de viviendas sociales de Persoonshaven, en el distrito de Feijenoord de Róterdam (Países Bajos), sugiere una adaptación de un tipo de vivienda especulativa que fue habitual a finales del siglo XIX. Las modificaciones en su imagen, su organización espacial, sus detalles y su estructura tienen su origen en las técnicas estandarizadas de construcción que se utilizan actualmente en Holanda, así como en los actuales reglamentos y normas relativas al espacio. Tanto la tipología como el método de construcción se van a describir en el marco de la caracterización del diseño tradicionalista de Martin Steinmann tal como lo practicaba el arquitecto danés Kay Fisker.

O projecto de habitação social em Persoonshaven, no distrito de Feijenoord em Roterdão, nos Países Baixos, sugere uma adaptação de um tipo especulativo de casa que é comum no final do século XIX. As alterações das suas imagens, organização espacial, detalhe e estrutura têm origem em técnicas Holandesas de construção contemporâneas e padronizadas, e regulamentos e normas espaciais contemporâneas. Tanto a tipologia como a metodologia de construção serão descritas no contexto da caracterização de Martin Steinmann do design tradicionalista como praticado pelo arquitecto Dinamarquês Kay Fisker.

In the 1997 essay *The Tradition of Objectivity and the Objectivity of Tradition*, the Swiss architect and theorist Martin Steinmann aptly sums up traditionalist design praxis as liable to "be simplistically divided into two categories: the first is related to the work it takes to create forms, while the second is related to the values with which the forms are invested. (...) In one, the idealistic view, tradition congeals into a set of forms with traditional connotations and that cannot be changed without removing the ground it stands on. In the other, tradition is something that is 'in flux'" (Steinmann 2003: 51).

To the Danish architect Kay Fisker, Steinmann argues, "tradition is not related to an 'image' to be preserved, and certainly not to the essence of a people reflected in that image; it is related to the material and intellectual conditions in which architects work. This includes the decision to use new means if they are superior to the old ones, but also not to use those means that are new or connote 'modernity' but are not better" (Steinmann 2003: 51). In other words, according to Steinmann, Fisker focused on the working methods of broad groups within construction culture rather than on static ideals.

The types of housing at Persoonshaven are part of a long tradition. They are widely seen to have originated in the 17th century. When Dutch urban dwellings ceased to be built of timber, they were typically designed as row housing with load-bearing brick cross walls. The width of houses was usually determined by the size of plots, which in turn was determined by the maximum span of timber beams, of around 6 meters. The timber sections were often reduced by adding a secondary load-bearing wall, the sleeper wall, separating the main dwelling rooms from the circulation bay containing the entrance, the hall, the stairways and (where present) kitchens and bathrooms. This type, initially for the wealthy elite, developed into a speculative multifamily model in which the circulation bay served small separated apartments, with or without sleeping alcoves. The width of that bay allows for two front doors side by side. This makes it possible to separate ground-floor dwellings from those on upper floors. These two doors allow variety within the type (Grinberg 1982: 27; Komossa 2010).

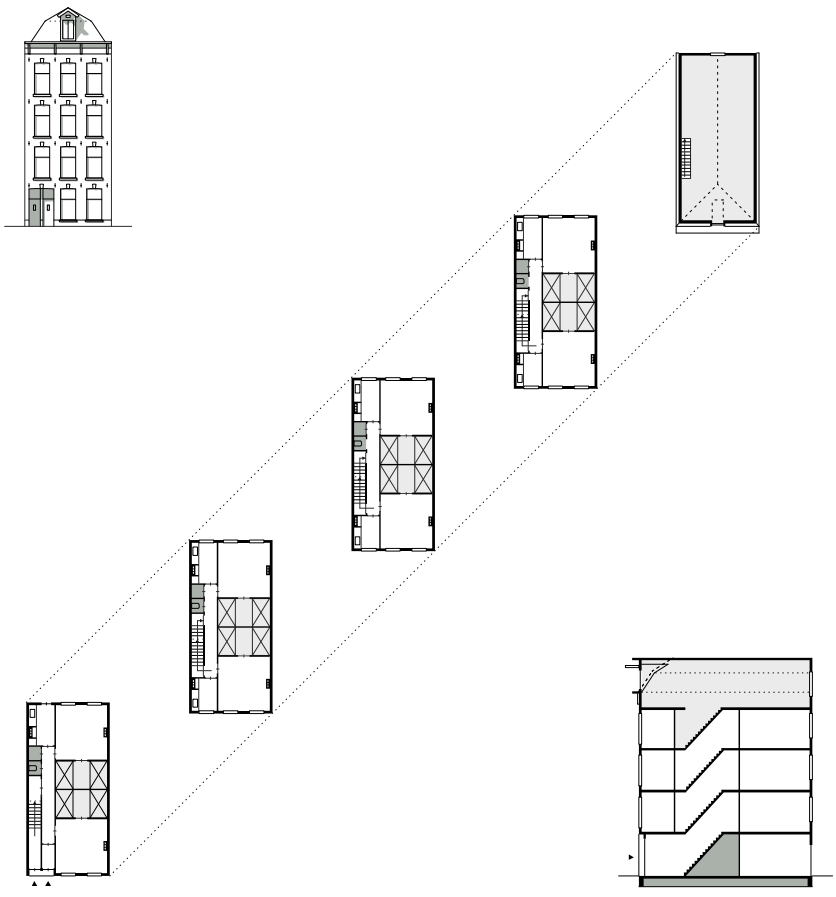


Diagram of nineteenth century house with two doors

1: Late nineteenth century speculative house with two doors
2: Minimisation of wall thickness and space size
3: Exception proving the rule, house with two separated front doors

Thus the two-door house type manifests itself in considerably different ways. In the late 19th century, it was the common house type in the western Netherlands (chiefly the provinces of Utrecht and North and South Holland), suited to speculative mass housing with as many as 8 or 10 apartments per house. In such cases, one door would give access to the upper 6 or 8 units while the other door would open onto 1 or 2 apartments or even a workplace or shop. Differences in appearance (i.e. 'image') were minimal, though it was not uncommon for spec builders to 'sign' their buildings with their own carved keystones above windows. As well as in workers' housing, the principle was applied in more varied manifestations of the type for middle-class homes. In such variants the units were reduced to just two stacked maisonettes or apartments and their

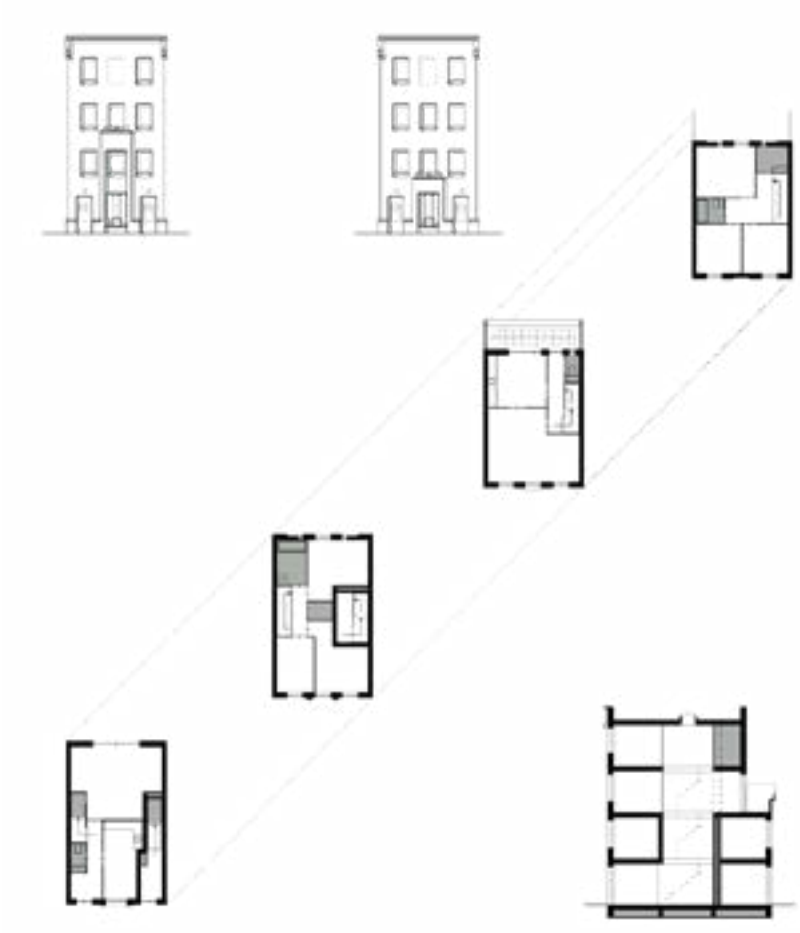
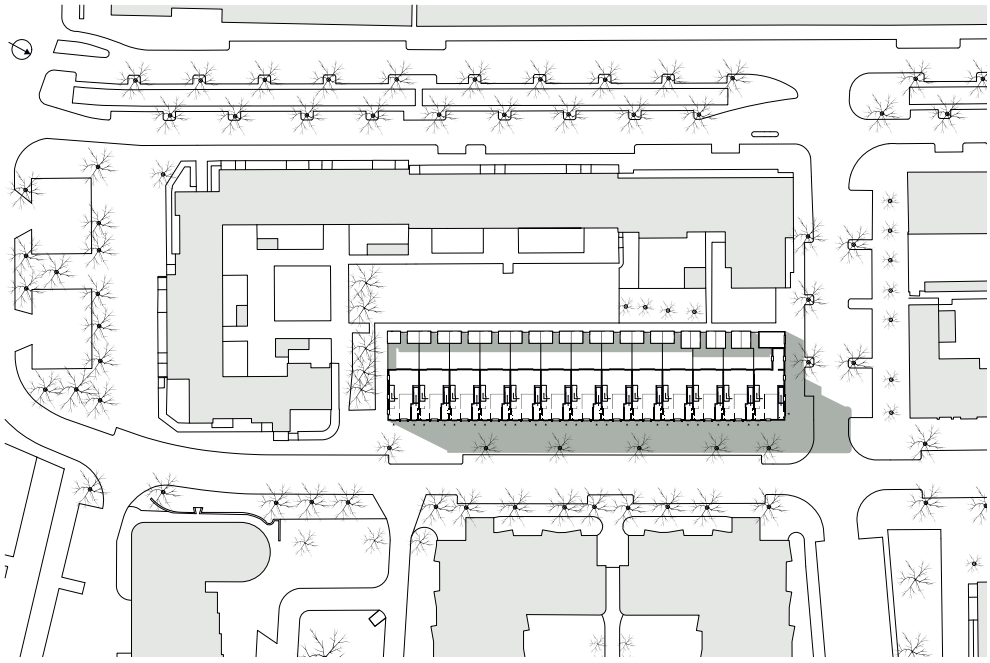


Diagram of Persoonshaven variant of house with two doors

Aerial view of the project site



Site plan

appearance was typically diversified. In both cases, the two front doors always marked the width of the circulation bay, introducing an asymmetry in an otherwise repetitive façade.

The two-door house was reintroduced in Feijenoord for good reasons. In the 19th century, the type had dominated speculative development in the area. Apart from urban and esthetic considerations, two-door houses with two stacked maisonettes had the clear benefit of avoiding difficult-to-manage circulation spaces, such as communal access decks and stairs. The street was assumed to regain its traditional status as a space for coming and going and meeting. After all, the street remains the arena where citizens learn, use and enjoy social codes.

But the design could not be directly copied from its precursors. After more than a century, building regulations had changed, requiring wide doors, meter cupboards, turning space for wheelchairs, etc. Modern concrete floors do not limit the spans of houses, so the secondary load-bearing cross wall has disappeared. It once sufficed to separate the staircases by a mere 70 mm wall, but today's sound insulation regulations require 300 mm walls. So the two front doors needed to be separated in the ground-floor plan, resulting in a symmetrical façade with the lower maisonette kitchen in the middle. It was as if the type were finally living up to its latent aspiration to symmetry. Because of the lack of direct historical references, this updated two-door house acquired a "generality" in its appearance, avoiding any a priori suggestion of wealth or lack of prosperity and suiting today's emancipatory ambitions in social housing.

The façades were developed with a comparable modus operandi. They are quite evidently made of brick, and again, what at first glance seems rooted in architectural tradition is actually different from centuries-old Dutch housing. The outer wall has evolved from a monolithic structure into an assembly of brick layers with insulation and a cavity in between.

Façade along Persoonshaven (Sebastian van Damme)

In 1991, Hans Kollhoff considered the resulting problem of tectonic plausibility in his essay *The Myth of Construction and the Architectonic*. This was 20 years after the oil crisis. Buildings were wrapped up in insulation and clad with all sorts of finishing materials. What we could name the "cold bridge modernism" which had been in vogue functioned no longer. According to Kollhoff, the separation of the outer façade layer from the main structure induced solutions which may be structurally sound but are less acceptable to the eye. In his words, the feel for the architectonic was at stake, whether a house "ultimately leaves an impression of solidity that gives me the feeling of being elevated. Or whether it constantly confronts me with details that call the house as a whole into question, in that components become independent, and I have to fear that everything will collapse like a house of cards" (Kollhoff 2010: 77).

Meanwhile, we may add, the meaning of the word "joint" is now at odds with its etymology. Today a joint separates building components rather than joining them. By contrast with the esthetic of three-dimensional joint patterns in the stonework of Palladio's renaissance villas, contemporary joints are strict technical requirements. They are there to allow thermal movement in the outer façade layer, detached from the main structure. Additionally, joints may be needed to separate different materials supplied and built by different subcontractors. Kollhoff again: "Maybe the silicon gun was the invention with the most impact on the second half of the 20th century" (Kollhoff 2010: 80).

Obviously uninterested in Kollhoff's objections, the Dutch architect Willem Jan Neutelings stirred matters up by stating that his buildings are born naked and then dressed up according to the prevailing trends: "The pattern of the materials may vary: one season it may be check, the next polka dot" (Van den Heuvel et al. 1997: 90). Façades, as Neutelings sees them, are consumer goods, regardless of sustainability, longevity, and appropriation by their owners.

At Persoonshaven, the response to this was a robust house design in which the plans, section and main façade are strongly interdependent (Van der Heijden 2016: 169). The façade is reciprocal

< Front facade with the spout ending the expansion joint (Sebastian van Damme)

> 1: Expansion joint as tectonic detail of the house 2: Manipulation of standard front door 3: Ressault and kitchen window 4: Detail of the rhythm of the Persoonshaven front façade (1-4: Sebastian van Damme)

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in its relationship with the structure, the building geometry and the type. Its look reflects the tectonic possibilities and restrictions of its main materials, in this case brick.

The Persoonshaven front façade has a regular rhythm of vertical windows, slightly modified by protruding brick features in the central axes. These ressauts, projecting by half a brick, introduce a degree of relief which was formerly common in the façades of row housing. The vertical expansion joint is articulated architecturally by bricks on edge, marking the load-bearing cross walls. In methodological terms, the design is a stable point of departure for further development, on the one hand defining the application of design solutions to different (and possibly unrelated) requirements, and on the other hand leaving room for negotiation in deciding on buildability.

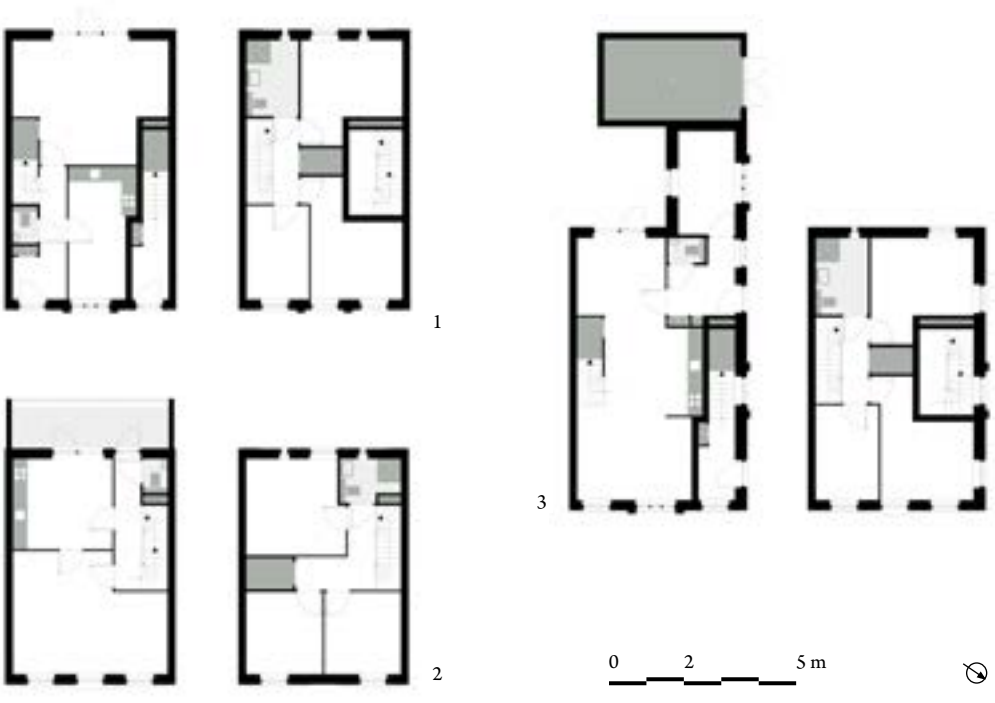
Sections and elevation of the façade

In this process of negotiation and design development, Dutch standard details were applied wherever possible. Only where appropriate, slight changes were introduced. The standard timber sections of the windows appear thinner than they are because they are partly concealed by the bricks of the façade. The back of the projecting bricks follows the general brickwork pattern and is easy to build. Timber battens were added to standard industrial front doors. The thinness of the steel railings was deliberately exaggerated in order to add fine details to a façade which is otherwise on the coarser scale of the human hand (bricks, timber window frames, sills, roof edges, and so on). Steel sections were bent to form curves. Welding was not used, again with cost-limiting effect.

For better or worse, in Dutch social housing practice, the micromanagement of construction sites is a phenomenon of the past. That is not to say that handcraft has disappeared from the construction industry altogether. The design question is rather one of where handcraft is to be found in construction nowadays.

So in the design process, the skills of carpenters in producing the formwork needed for prefabricated concrete were used to guide the site works from a distance. Eaves, copings, sills, and spouts (obligatory under Dutch building regulations and normally specified by structural engineers in technical terms) were drawn into the architectural realm and their relatively complex shapes were eventually produced with great precision. They are the ornaments of façades – tectonic details, as Kollhoff might say. Both concrete and steelwork presuppose a high degree of manufacturing expertise and quality management is restricted to specifications and form drawings and the assessment of production drawings and samples.

By contrast, brickwork benefits from the skills of the bricklayers that are still widely available on Dutch building sites. Brickwork is very much a bulk product and brick façades are cheap to produce. The design question is how to influence such standardized practice. At Persoonshaven several changes to this practice were proposed. Within the lower price range of bricks, a nuanced factory-made but quasi-handcrafted brick was selected. Laid with a random bond, its horizontal joints were pointed and deeply recessed whilst the vertical joints were minimized in size. This results in façade planes with deep orange tones and a strong texture. The tile bond of the protruding features also helps avoid any impression of bulk production.



1. Lower standard maisonette, ground and first floor plans
2. Upper standard maisonette, second and third floor plans
3. Lower corner maisonette, ground and first floor plans

It might be argued that architecture is always an act of imitation. But analogous design is different from literal copying in its use of historic precedent. The Persoonshaven project shows a design practice seeking to operate within the practice of Dutch construction culture. The design optimizes and engages critically with this rather than seeking to disregard or rework the culture in which it was conceived. The use of available types and building know-how contribute to affordability, buildability, acceptability, and sustainability. All such choices make these buildings analogous to those of the past rather than close copies of them.

By way of conclusion it is worth quoting Steinmann at length: "The essence of Danish architecture was once explained by the two types of people who inhabit the country: they are farmers, and farmers distrust new things. But they are also sailors, and sailors love to bring foreign things home. The history of Danish architecture is the history of foreign ideas that have influenced traditions in the country. (...) This image of the farmer and the sailor, which is more than just a metaphor here, addresses a fundamental condition of tradition: it is dependent on novelty that it cannot produce itself, just as novelty is dependent on tradition. It makes no sense, therefore, to wish to abolish the tension between them; in this tension they condition each other. In other words, tradition is only possible as a critical tradition – within this opposition" (Steinmann 2003: 57).

Steinmann's quote on Kay Fisker's praxis comes from his book *Forme Forte*. Does the title suggest an agenda, an a priori striving for strong form perhaps? Although the Persoonshaven design process is clearly akin to Fisker's approach and design methods, the form and appearance were never preconceived. And any such strong form is precluded by the two-door house design. Form is as much a consequence of a cultural reality as a representation of an ideal (Van der Heijden 2000: 110).

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Biography | Biografía | Biografia

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Hans van der Heijden (The Hague, The Netherlands, 1963) is an architect with a portfolio of housing, urban design, re-use, cultural buildings, and research. He studied architecture and urban design at the Delft University of Technology. He co-authored four editions of the *Dutch Architecture Yearbook*. For the Rotterdam architecture platform AIR, he curated the debate series entitled *Architecture Cases*. He has been a professor in Cambridge and is lecturing at the Rotterdam Academy of Architecture. He is Honorary Visiting Professor of Contemporary Practice at Liverpool University and a member of the Design Board of Potsdam, Germany.