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Silent distances and the Permeable Home

Abstract:
The article is about the permeable skin of the dwelling, where the inside and the outside meet and about the invisible distances people need and use as a silent border to each other.

The interior does not exist without the exterior and vice versa. The link between both is created by the material form which defines spaces, thresholds and boundaries. The architect is the one who defines this material form. But people themselves define borders as well without using the material form. In a unconscious way they define silent boundaries by using their behaviour. People use space which they maintain among themselves and others as invisible space, silent and invisible *bubbles*. As space is one of the basic organisational systems, designers can use this information to design boundaries from outside to inside very carefully. As the anthropologist E.T.Hall says: "No matter what happens in the world of human beings, it happens in a spatial setting, and the design of the setting has a deep en persisting influence on the people in that setting". (E.T. Hall ;1966; The Hidden Dimension, p.XI preface).

First I describe the phenomenon of this invisible space. Then I show how architecture deals with these distances by analysing several Dutch residential complexes and their boundaries from street to the entrance door, from public to private. This architectural "discovery" will be compared to the invisible spaces and the architectural answers of other cultures. It is necessary to use this knowledge when building a home, as there is an increasing density of dwellings in cities and an increasing involvement with people of different cultures in all parts of the world.

Keywords:
Permeable skin; intermediary space; invisible bubbles; silent distances; thresholds; cultural mixing

Birgit Jürgenhake, Delft University of Technology, The Netherlands, Faculty of Architecture, Chair of Architecture and Dwelling, T +31 6 39251417, b.jurgenhake@tudelft.nl

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1. Foreword

The home and the way it is designed are always going to be a subject of discussion. The façade as the very first membrane of the house is the first part of a home that everybody sees. You can represent yourself there. You can watch people outside and be watched there.
Therefore the façade is the striking element where you can present yourself to the spectator. At the same time this membrane is a very important filter of the home. It is a filter for the climate, a protector against the rain, the sun, the wind and coldness and it is a social filter – a filter between public and private, between interaction and withdrawing. The tension between interior and exterior, one can be inside or outside, the thresholds, the transition between the inside and the outside: this membrane with its openings is an arena for individuals and the public, for the private and the public spheres.
As an architect, this fascinates me! People are always making some kind of adjustments to their homes. Right from the dawn of time, people started to give their house a face by decorating their tent, their cave or hut as lovingly as their own clothes; and they introduced elements to control access to and from the outside world, to achieve the right balance between insulation from and openness to climatic influences, daylight and other people.

The question which at present arises for me with regard to the facade is based mainly on today's design of residential buildings. Large residential areas with often very minimalistic facades and little spatial diversity in the facade gave me the following impression: The facade seems to be an independent design object with little differentiation. Even worse says Xavier Gonzales: "To compensate for the uniformization of the body of habitat and respond to desires for difference expressed by the future buyers, weary architects have little by little abandoned experimentation in living space to concentrate on envelope and appearance. They vary supply in formal terms, playing on different materials and styles in the same way as ready-to-wear clothes makers react swiftly on fashion trends. […]Architecture has lost the sense of its social ambition and is concerned with little more than décor, a wardrobe, a marketing product designed with clearly identified commercial targets in mind." (Gonzales X.; 2004, Density IV – Densidad IV; chapter: Barbie's new clothes; p.273 and p.275)

This kind of critical comments, my fascination and my interest in the discussion brought me to a research of the façade as the very first membrane of the home focussing on the two important aspects, the *face* and the *filter*.

2. Introduction

The starting point of the research about the face and the filter of the façade of dwelling projects resulted into the theme "The facade as an intermediary element between outside and inside – based on Dwelling in the 20th century in The Netherlands". The main question of the total research is: How is the façade related to dwellings of the 20th century in The Netherlands? The word *relation* is chosen very consciously because there is always interdependence between the two conditions – the outside and the inside, the public and the private, the inclusion and the exclusion.

This paper focuses on a small part of the whole research. It focuses on the invisible spaces people create around themselves. What kind of invisible distances do people have to each other and how can designers use this silent distances designing the membrane of the home? Are there examples of distances in architecture that are based on the unconscious and invisible distances people need and use as a silent border to each other? As space is one of the basic organisational systems, designers can use the information about invisible distances to design boundaries from outside to inside very carefully. As the anthropologist E.T.Hall says: *"No matter what happens in the world of human beings, it happens in a spatial setting, and the design of the setting has a deep en persisting influence on the people in that setting"*. (E.T. Hall 1966; The Hidden Dimension, p.XI preface).

Once starting to think about invisible bubbles, you see them everywhere! In the following chapter I will describe the research of E.T. Hall in this question and in the chapters 4,5 and 6 I will try to give some examples where we can find this phenomenon in the permeable membrane of the home.

3. The phenomenon of the invisible space

In the book "The Hidden Dimension" from Edward T. Hall (1966) the author attempts to provide an organizing frame for space as a system of communication, and for the spatial aspects of architecture. Actually his research shows how people keep distance without even noticing it themselves. The need for some kind of privacy works unconsciously but organizes spaces anyway. As E.T. Hall is not a city planner or a designer or an architect, he does not give spatial examples, but intents to give information which could be very helpful as a starting point of research in this. The term *private* is very important and used frequently by E.T. Hall. What does private mean?

The term *private* comes from the Latin word *privatus* which means non-official or belonging to a particularly person or group of persons. Very often the word private is used to indicate that something is personal, someone's own property. Private is seen as the opposite of public, for example private domain versus public domain. To get a deeper understanding of the meaning of privacy the author Irwin Altman is very helpful with his research about privacy and his book "The environment and social behaviour". In this book he defines different types of privacy. Privacy is the *"selective control of access to the self or to one's group"*. (Altman I. 1975, The Environment and Social Behaviour, p.18)

Privacy means a control system between a person and others. The different kinds of privacy as Altman explains are **acoustical privacy**, the need not to be heard by everybody everywhere, the **visual privacy,** the desire and need not to be seen by everybody and everywhere, and there is another kind of privacy, a social one. You could call it a **social privacy** or a **personal privacy**. The aspect of the social privacy deals with the essential balance between an openness and closeness to the environment of men. Men need the choice between these two aspects. If this is not the case there will be the chance of extreme situations like social isolation or crowding. This makes clear that privacy is a very basic desire of men and the built environment is one of the means to get this privacy. As Machiel van Dorst, who does environmental psychological reseach, writes: *"The built environment is one of the means with which the obtained privacy has to be balanced with the desired privacy"*. (Dorst M. van 2005; Een duurzaam leefbare woonomgeving, p.128)

Figure 4-3. Social distance—a zone used widely in public settings. (Photograph by Jim Pinckney.)

As we have seen and applied to dwelling and its environment this balance between contact to others and a private place is very important, as well among the inhabitants of one single dwelling as between different groups of dwellers. I. Altman refers to E.T. Hall when he introduces the word *personal space*. It seems an unwritten law that people leave some space to each other, as the photo shows.

Photo from: Altman "The Environment and Social Behavior"; The University of Utah, p.112-120

Eduard T. Hall did research about this personal space and the need of privacy. Privacy can be arranged by visible and invisible space. Personal space is defined by Hall as an invisible space around a person that can be felt by others. This invisible space is important for the personal privacy, mentioned above. In difference to this invisible bubble **territoriality** is the visible space of a person or a group, protected by elements like hedges or walls against others.

As we cannot see the invisible space, it seems to be important to study about this space more deeply. Architects need to understand this silent communication. Human beings have built up invisible spaces, "bubbles", and because of this they are able to function in very dense (dwelling) environments.
As I mentioned before Hall himself did not give any architectural spatial examples how to work with this invisible bubbles. He intents to give information which could be very helpful as a starting point of research in this. In my research about the façade as a filter I give attention to his results and try to analyse some Dutch projects focussing on this theme as a part of my research.
Hall's fieldwork started with research about animal behaviour and later different cultures of men. Later Hall was able to categorize the different invisible spaces to four main groups. Based on observation he could conclude that different actions take place in different spaces with a distance to each other that was almost the same in different cultures. Within the European and the American culture the behaviour in relation to the spaces was almost the same; in other culture it seams to be a little bit different. But nevertheless he could conclude the following four groups of spaces.

I: The intimate distance (max.45 cm)
If a stranger comes more closely people will get nervous. The intimate distance is the first bubble people have around themselves. Activities within this distance are huging a good friend or member of family for example.

II: The personal distance (max. 120 cm)
This distance is not exactly fixed between different cultures. It is a distance in which people could touch each other, but are not expecting that. Smell is still recognizable. This distance is a little too close for strangers, but people can handle it without getting nervous. As one culture accepts a closer distance of 75 cm, there are others who would feel it as too close.

III: The social distance (max. 360 cm)
This is the area of the working distance. It is impersonal and business distance between strangers. Hall differentiates between a closer social distance (1,20 – 2,10) in which persons feel more participating and a broader distance in which people introduce themselves to each other in a very impersonal way.

IV: Public distance (max. 600 cm and more)
Details of eyes and skin are not recognizable any more. Other persons are in the picture as well. The distance is very anonymously. People remain strangers. Hall calls it the frozen style.

Hall arguments about this research: "The *ability to recognize these various zones of involvement and activities, relationships, and emotions associated with each has now become extremely important. The world's populations are crowding into cities, and builders and speculators are packing people into vertical filing boxes – both offices and dwellings. If one looks at human beings in the way that the early slave traders did, conceiving of their space requirements simply in terms of the limits of the body, on pays very little attention to the effects of crowding. If, however, one sees man surrounded by series of invisible bubbles which have measurable dimensions, architecture can be seen in a new light."* (Edward T. Hall 1966; The Hidden Dimension, p. 129)
This argumentation shows the importance of the invisible spaces for Hall. It could be a starting point to think in a different way about designing dwellings, environment and cities.

4. The relation of this phenomenon to architecture

In his research Edward Hall showed us that people have a self regulating unconscious system to control their need of privacy. Everywhere where people meet each other and communicate with each other, this system works. In my PhD research about the facade as a face to the city and a filter between outside and inside, I will use this information as one of the tools to look at the architectural elements and spaces I will analyse in my case studies. A great part of the filtering takes place at this part of the house, the membrane between outside and inside. Each place where openings between the two conditions of the outside and the inside are present, the place can function as a border or threshold. Architectural spaces and elements can help to combine outside and inside or to obstruct. An architectural space is a space made by the material form, by elements. This could be steps, walls, openings, change of material itself for example can be a mark to a different space.

Looking at a dwelling, no matter whether piled up or free standing, there are always spaces and parts of interest. The entrance for example is one of these parts. Here people are confronted which each other. Like this a window, balcony or walkway can be a potential place for meeting each other. How can architecture deal with the invisible distances?

A personal distance, dealing with 120 cm, in dense dwelling environment very often is the distance which you will find at the entrance of houses. People can touch each other at this distance, even this is not expected. An entrance, positioned directly towards a public space can easily lead to uncomfortable situations. Not everybody who rings is known and welcome. It is to be noticed very often that these kinds of situations introduce a spy, a chain on the door or a mirror at the window next to the door. More closely, the distance of 45-75 cm, lots of people feel uncomfortable with. So the mat in front of the door is not only to clean your shoes, it's a symbol, a mark that tells you: "Stop walking on, unless you are invited". The mat as a simple material thing becomes a symbol and functions as a threshold.

Architectural means can support the passage from outside to inside or obstruct it. In case of a small entrance space it forces an uncomfortable intimacy. The entrance is one example and it should be studied how and where this mechanism of invisible bubbles involves architecture in the next chapter. To summarise the results of E.T. Hall and combine them with the first obvious architectural elements and spaces, the table is made as a starting point for the case studies that follow.

Architectural elements at the facade in combination with the invisible privacy bubbles, mentioned by E.T.Hall : ***Where could the invisible space be part of architecture?***

Distances by E.T. Hall:	**Intimate Until 45 cm**	**Personal 45 – 120 cm**	**Social 120-360 cm**	**Public 360 -600 cm**
	- entrance of the apartment - very small balcony - small collective staircase forces to intimate distances when passing each other	- entrance - balcony - window - terras	- balcony - balconies among each other - terraces among each other	Intercom - balcony - balconies among each other - terrasses among each other

Al these architectural means support the need of privacy. They support a social filter of the house. This filter will have two levels, one on the scale of the total dwelling bloc, and one on the scale of each apartment. The Dutch architect Herman Hertzberger describes this process of entering as the whole complex of experiences that support the "act of entering". (Hertzberger 1996; Ruimte maken – ruimte laten, p.86).

It seems to be like theatre scenery with the best fitting backdrop.

The entrance is only one place to look at, as there are different scales from the city to the apartment itself, to understand the whole process of outside – inside transformation. The

whole entering process starts with a mainstream and ends up with several smaller streams, in several directions up to each individual dwelling. There is a kind of hierarchy in this process and there are different places and elements belonging to this hierarchy.
In the next chapter I will look at some case studies of Dutch dwelling throughout the last century. After that starting point it will be interesting to search for examples of other cultures.

5. How does Dutch architecture deal with these distances?

In the beginning of my approach I asked the question: How can designers use this silent distances designing the membrane of the home? Next to the very complex visible elements of architecture of the membrane, and next to the touchable elements, this is an approach that is not taken into consideration very often because it is not visible. During my research about the façade as a face and a filter of the home, especially the filter function is important for these invisible agreements between people. This is only one aspect of a very complex research process. During my research I study on several cases out of the last century. With the beginning of the last century The Netherlands got a new housing law that changed a lot in the design of dwellings. It is of les use to compare dwellings before and after the law because the conditions where very different. Therefore I decided to choose the case studies ongoing from the introduction of the *Housing* L*aw* (Nederlandse Woningwet 1901), but as a starting point of my approach about the treatment of this desires in privacy and the spaces that could manage this, I will show some examples of the history of the Dutch dwelling and its filter.

The Dutch Chanel House in Amsterdam:

The normal type of house in a Dutch town was the house in a row, with the ridge at right angles to the street. The entrance hall needed a large front to light the basement and the upper room as well, and these large fronts lent the façades a characteristic appearance. By the Golden Age (1609-60) most houses were built of brick rather than timber because of the high fire risk.
Many families had their own home, however simple. It was shut in at the side and the rear, so light could only enter from the front. Zanstra describes how the Dutch occupants of these houses often lived in front of them: *'Anyone wanting fresh air had to go out the front door. This created a desire to annex a strip of land in front of the house, a piece of pavement, with a bench to sit on, often a water butt, and covered steps leading down to the cellar. This pavement has had far-reaching consequences for the Amsterdam house down the centuries, a strip of land about a metre wide with many uses and aesthetic qualities. Only our own era has not understood this and has stopped making Amsterdam houses with pavements and done away with the old ones. An important element, mainly aesthetic, has been lost – in many cases unnecessarily.''* (Zanstra, Giesen & Sijmons 1946; *Bouwen van woning tot stad*, p. 184 by A.A. Kok, BNA architect)

Two paintings illustrate the pavement in front of the entrance: Johannes Vermeer's *Little Street* of 1657 shows a nice old brick façade, with a woman cleaning the pavement, which is one step higher than the street, and Jan Steen's painting also shows the clean pavement. Actually this zone of only one meter created a distance to the public. One meter related to the research about the invisible space is exactly the personal distance of 45-120 cm which is considered by E.T. Hall. As it was a pavement this zone was owned by the public, but a step difference in height and another materialization guaranteed a feeling of an own small outside space, directly in connection with the public street.
The personal space is actually not exactly what people desire towards strangers. People would prefer a more impersonal and business distance, as Hall found out this would be the social distance of maximum 360 cm. The first and quick conclusion would therefore be that this

meter zone was fine, but very minimal in case that a stranger was standing in front of the door. The Dutch dwelling in that time was combined with the working place very often and the entrance was a business meeting point as well.

1.

2.

3.

Looking more deeply to the drawings and photo's, one can see much more. The materialisation of the pavement is used as well in the hall, the first room of the house. The hall gets some public character because of this. The anthropologist Irene Cieraad studied about this Dutch Hall. Looking at Dutch houses in the city, there was no big entrance space in front of the house. So the hall got the function of a "transitional space", as she calls it. (Cieraad I. 1999; At Home; pag.18) The painting of de Hoogh shows that the door closed this hall hermetically, because there was no glass in this door, but the door was split up into an upper and a lower part. This offered a very simple choice of making the space more private than it actually was, as the situation in the town and the lack of available space forced to deal with space in a creative way.

Illustration 1: Johannes Vermeer, 'Little Street', 1657
Illustration 2: Pieter de Hooch, 1675
Illustration 3: 1623, Enkhuizen, façade of Breedstraat 23

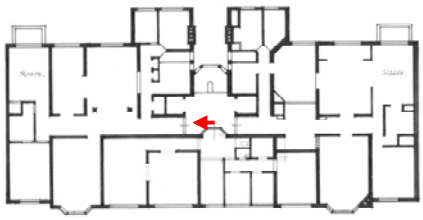
In the traditional Dutch house the front door was in direct contact with the pavement and the street, but this was lost with the rise of the portico and the access balcony.
In the following I will describe some cases after the *Housing Law* of 1901.

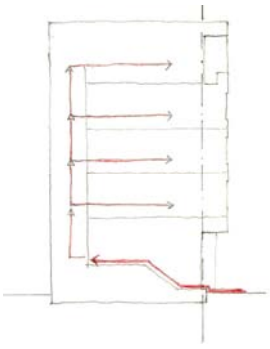
Evidently the Dutch still felt the need for a veranda or something similar, as is clear from the *Spangen* project in Rotterdam, a working class housing development built in 1919. These were small homes with a fairly high density, but the architect, Brinkman, referred back to the old tradition, living in front of the house on the pavement. As the dwellings had to be stacked he designed a wide access balcony. This made it more than just a functional feature: it became the new pavement, where the milkman drove along in his float. This access balcony offers a lot of space, very often two and a half meter, which is a distance for personal up to impersonal and business distance between strangers (360 cm maximum). The houses do not have an entrance hall and the inner organisation is very pure. Any distance that is needed op keep some personal space has to be arranged outside.

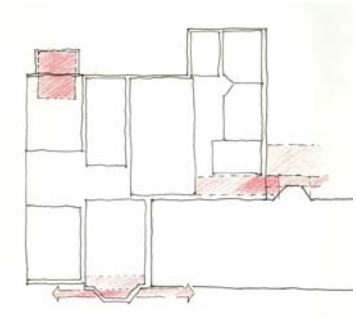
In the two case studies that follow I will look at the transitional space more deeply.

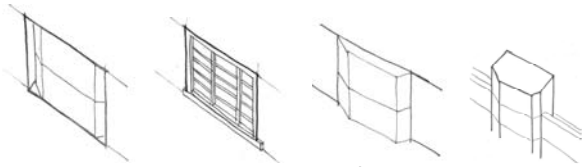
Case study "The apartment Oldenhoekstraat"; arch.: Warners 1925-26

The apartment *Oldenhoek* is one of the first apartment complexes in The Netherlands where apartments are piled up to each other with a certain comfort. The architect Warners introduced this type as a comfortable dwelling type for the city as an alternative to the well-known city house in row. The building is standing directly next to the street and pavement. There is one main entrance for the whole building, emphasised by some stairs outside the building. This forms an outside portal of about 250 cm. The building itself covers this entrance by overhanging building elements like bay windows for example. This forms the scenery for the outer entrance. The entrance really gets a portal. The entrance doors are much closed; only some small glass windows give some glimpse of the inside.







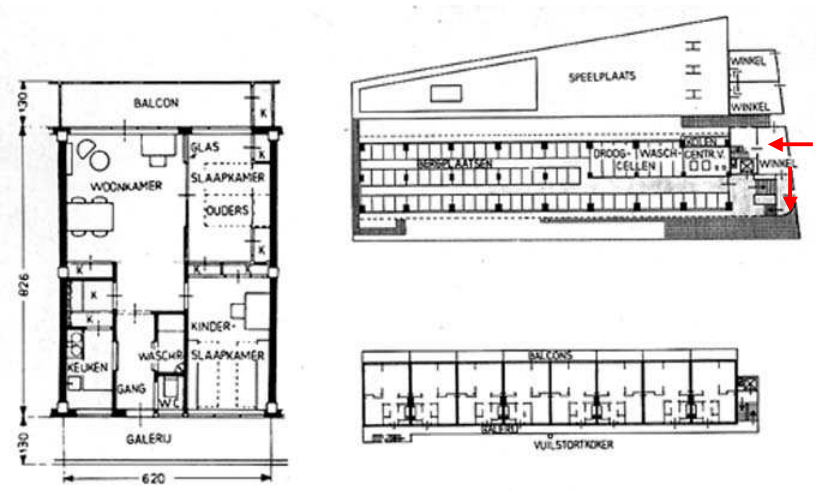


architectural elements to make an overhanging façade to the street

Inside the scenery continues by stairs to the upper floors, to the apartments.
Every floor has three apartments. The space in front of these three entrances is about 200 x 300 cm. This is not very much and actually the hall inside the apartment is very small as well. The scenery space of the whole process of entrance which starts already outside gets smaller and smaller. Warners wanted to design luxuriously, but looking at the space in front of the three apartments on each floor, it is not more than a staircase landing.

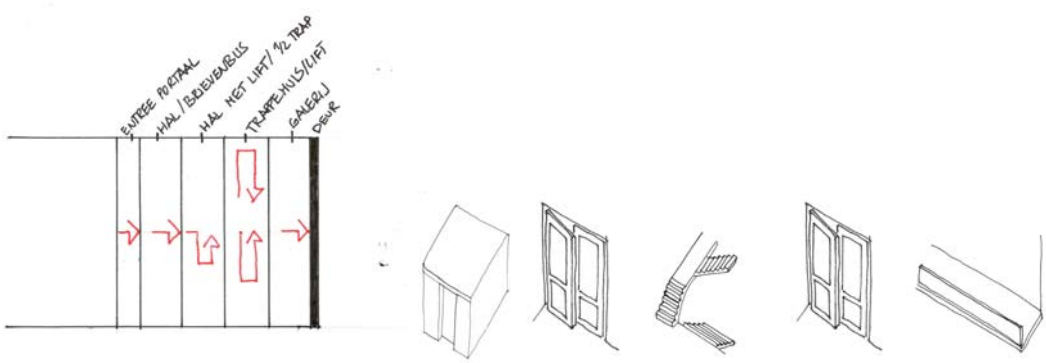
Interesting are the bay windows to the street. As the building has no distance to the pavement and is really built on the border of the pavement, the bay windows allow the dweller to have a broad and deep view into the street. At the same time, walking next to this building, gives the impression as walking under a roof, because parts of the building are overhanging the street.
The backside of the building, in contrast, is very private. Small balconies are situated here and the inhabitants of the bloc have their own tennis field.

Case study "The Berg polder apartment building"; arch. Van Tijen 1932-34
The mass housing in The Netherlands forced to a totally different way of designing and thinking about space. The flats *Bergpolder* in Rotterdam were based on the functionalist principle: they are small but have a balcony facing west along the whole width of each flat. The block of flats changed the way people entered a residential building. Reaching your home was a much longer process, via the entrance hall and an elevator or staircase, along a long access balcony to your front door. The entrance is not accentuated and the access balconies are long and narrow (120 cm!). To analyse this bloc more deeply I have to start at the city level.



The building is standing on a lawn and surrounded by a hedge. There is only one side, the north side, where you can reach the building and enter it. The entrance is an outside portal, a small space of 150 x 150 cm. Here you have to use the bell or intercom (later installed). This portal is so small that it is impossible to pas each other. Directly after this small entrance the bigger hall starts, where you can orientate and where the post-boxes are placed. With a change of direction you come to the staircase with the elevator. Here the mainstream ends up with

several smaller streams, up to each floor level, to the access galleries, and to the individual dwelling. The hierarchy I mentioned before becomes clear here.



Hierarchy of entering process entrance hall door staircase elevator door access gallery

In this process of entering there are places which are designed very narrow. E.T. Hall perhaps would say too small. The portal is only 150cm x 150 cm, but the entrance door is glazed and the hall behind it is big enough for a social impersonal distance. The staircase is minimal as well; but the entrance to the elevator has half level difference and therefore its own space. The whole staircase is surrounded by glazed walls which gives much more feeling of space. The access gallery of 120 cm is very small. Interestingly people put mats there even in this small space to mark the entrance of their private home and to keep some distance. Actually a stranger could come here easily and even the personal space is not guarantied. When opening the door men has almost no possibility to keep the distance he wants or needs unconsciously. The entrance is par excellence a place to deal with invisible distances, each opening that is situated directly to the collective or the public realm is a place to treat with care! Nowadays there is an intercom to avoid strangers out of the access galleries.

The balconies on the West side of the Bergpolderflat are next to each other. They are 120 cm deep and as long as the apartments. A half lucent glass wall separates them from each other on each side. People cannot touch each other, but it is very striking that the sun screens are used even when the sun is not shining and there is no need to use them.
It seams that the screens do not only protect for the sun, but help to create a more private space. Acoustically it is of no sense, but visually and social it is very important. The dweller has the choice to make his invisible bubble, even in a space of 120 cm in direct contact with four neighbours.

Evaluation of the two case studies:
(And additional the traditional Dutch House)

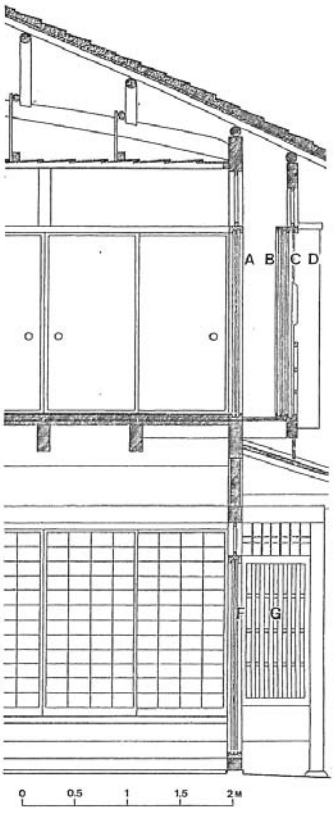
- Comments about the design

Distances by E.T. Hall:	**Intim Until 45 cm**	**Personal 45 – 120 cm**	**Social 120-360 cm**	**Public 360 -600 cm**
The Dutch Chanel House		- A one meter pavement area • One step higher than the street • Different materialisation	- The hall inside the house • Same material as pavement • High windows • Two parts of the entrance door	
Oldenhoekstraat		- The hall inside the apartment	- The outer portal • Overhanging elements stress the entrance - The staircase inside - The hall in front of the apartment entrance	
Bergpolderflat		- The outer portal - The access gallery • Very light - Very small hall inside the apartment - The apartment balcony • Sun screens help to create privacy	- The glazed entrance hall • Light and friendly - The staircase with glazed membrane • Light and friendly	- The position of the building to the city

6. Other cultures and borders within the permeable house

In an article about the transactional space in traditional Japanese architecture the author Günther Nitschke regrets the loss of the Japanese “en” in the architecture, the bridge between the outside and the inside, a space which was accepted and used by everyone in former times. He writes: “The structural geniality of the “en” is the sense of joy, which it mediated, became a victim of air-conditioning and modern standard. Meanwhile the three basic layers of the *en*, the *amado* (wooden doors with ventilation slides), the glazed door and the *shoji* (windows filled with paper) are pressed into one layer”. (Nitschke G. 1989; “ *en* – Transactional Space” in: Daidalos No.33 15.9.1989 p.76)

To understand this more deeply we have to take a look at this former zone, called *en.*
The term *en* has its origin in the Japanese culture. It exists in very different contexts, but the essential meaning is always the same. In the Buddhist tradition it refers to the law of Karma, the bridge between course and effect in the chain of human actions. In social actions it is the bond between individuals, for example *en-musubi*= the love bond. In architecture it is the bond between outside and inside, *en-gawa* means porch. In all the different contexts *en* implies connection and at the same time, simultaneously, separation. Very deeply it shows the ambivalent being of men, being interdependent among each other.
Focussing on the architectural feature of *en*, the first thing that strikes is the huge overhanging roof. It defines the edge of the building and gives space to the sphere under the eave. It is a place for climate, visual and social interaction. Until the end of the 19th century most of the Japanese housing were built in wooden frame structures, one or two stories high. The space which mostly had a depth of 60-100 cm was treated in different ways. The dwelling–shop (or living-working) and the house–garden type were the two main types where the feature of the *en* was used. The living-working type combines both functions and faces them directly to the street. The transition from private realm to public becomes very important. The floor level is one step higher than the street level, which already is a threshold for men to step into the house. The zone of 60-100 cm was enough to keep the personal distance of 45-120 cm. Smell is still recognizable which was important if selling food. The layers of the translucent shoji, the glass panels and the rain shutters, the hanging bamboo blinds and the *noren*, the curtains above the doors with the name of the family, all this helped to avoid directly visual contact with the dwelling and working room behind the *en.*



section of the *en*

Living-working type: Kiso-valley, Japan

Living-working type: Kiso-Valley, Japan

House–garden type: Kiso-Valley Japan

Nitschke summarizes the existing of the *en* as an interdependent relationship between architectural artefacts and social structures. Architecture cannot exist and is not independent from the social context. Each part is a part of the other as well.

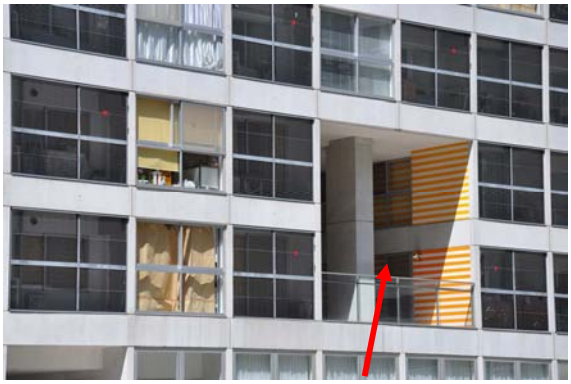
As the author complained already in modern Japanese architecture this phenomenon of the zone "in between" is not existent any more in that way. Modern technology flattens the spatial façade to a monolithically wall. The combination *living-working* on street level is declared to die. Big living areas, separated from the working field, rose up in the suburbs. Combinations of living and working are found in a very different way. In the project Shinonome Chanel Court in Tokyo, Riken Yamamoto and Field Shop built two residential blocs. The apartments have a room for several functions at the entrance of the apartment. This room is called the *foyer-room* and the type of apartment is called SOHO (Small Office/ Home Office). It combines high-rise residential building with commercial space and shops to a mixed used project.
"The main characteristics of this housing development are the 'common terrace' which is a volume carved out of the residential building, the 'foyer-room' which can be used as a home office, sunny center corridors, and sunny bathrooms/kitchens. Placed randomly on each floor, a common terrace of double height is surrounded with foyer-rooms. Connected to common terraces, people can use these foyer-rooms as SOHO, nursery space, or hobby rooms. Each common terrace is surrounded by the 'foyer rooms' of eight housing units. One fourth of the units face the common terraces. The other units are separated from the center corridors with glass partitions. Because of the terraces that occur at intervals throughout the project, these center corridors have the light and air circulation of exterior space. Placing the foyer rooms by the center corridors can make residential rooms open toward the corridor. To allow for large, square foyer rooms, bathrooms and kitchens are by the outer wall. This is a blend of homes and workplaces rather than homes next to workplaces. We tried to enlarge the potential of collective housing, putting the function of office into housing." (Riken Yamamoto).

Public realm and private home are separated. There are several levels between both. First the commercial space is running through the residential complex. From there several staircases lead to a landscape of collective gardens and to the entrances of the buildings. This already is a clear filter. To enter the building you have to be invited, all doors are hermetically closed and controlled by cameras. Once inside, broad corridors, enlightened by the common terraces, will invite you. Because of this filter from public to private, there is generated very much space and there won't be unpleasant close confrontations.

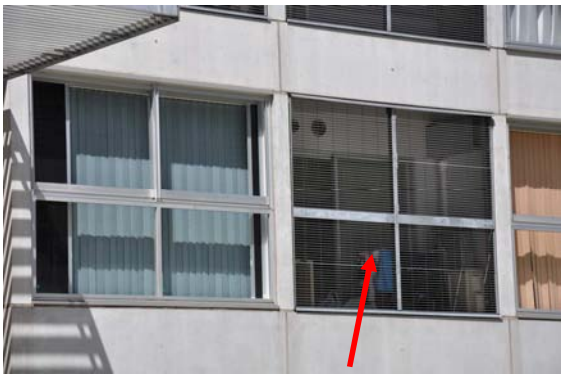
Very different is the picture of the small loggias, each apartment has. They all have metal lattice all over the opening which makes the loggia an outside place with much privacy, it avoids direct visual contact with the public, but it avoids the sun as well. It seams that the old tradition of bamboo blinds, curtains and wooden doors with ventilation slides came back here in a different materialization.

Public realm

Collective terrace and entrances



Common terrace



Private loggia behind metal latticework.

Conclusion

This article intended to look at the filter of the residential house in a different way. I looked at the thresholds and borders of the membrane of the home from the outside to the inside with the perspective of the invisible space, the space people create around themselves as a first and unconscious protection of their personal privacy. This focus needs an explanation about the different kinds of privacy and about the invisible distances E.T. Hall considered. In relation to architecture the approach of Hall gets a material form and we can analyse places, spaces and elements in relation to his considerations.

The history of the Dutch houses shows us that lack of space at the entrance of the house can lead to interesting solutions. The fact that people desire more distance to strangers (1,2 - 3,6 meters) and this had to be flattened into a zone of one meter, shows this. The pavement gets a little step and sometimes a different materialisation. Very often the materialisation of this one meter zone and the hall was the same, so both could be connected to one big more public zone which could be used for business actions. At the same time the door was split up into an upper and a lower part and people could create a more private entrance hall as well. Irene Cieraad calls this one meter zone the *transitional space*. This means a space that you are passing, going through. Interestingly Günther Nitschke calls the "*en*" of the traditional Japanese houses the *transactional* space. This means a space where different actions can happen. In both cases there is a clear desire to create and use a space as an "in between", a bridge between two sides, the outside and the inside, or two actions, dwelling and working for example. With the introduction of more dense and the stacked apartments the process of entering the house changed totally. The Bergpolder flat as a functionalistic residential housing complex shows a lot of minimalistic measured transitional spaces. Starting with the outer entrance portal, the very small access gallery and the very small hall inside, the inhabitant has no possibility to create a buffer zone in front of his own apartment. At the same time the process of entrance is much longer. There is a hall inside, a very light (totally glazed façade) and friendly staircase and an open access gallery. The residential building of Warners in Oldenhoekstraat offers a more representative portal and the overhanging bay windows create a bigger entrance space. The entrance process inside the house is mainly the staircase in the centre. Spaces get smaller and smaller inside. In both cases the designs were described by the designers themselves, but the matter of privacy was not mentioned in the context of outside- inside interrelationship.

The historical example of the Dutch Chanel House en of the Japanese House where built with a one-meter zone between two actions, two sides and between the public and the private. In both cases this space creates possibilities to keep distance or to interact. The cases show that the analysis of residential buildings with this focus of interest offers a new perspective for the analysis and for the design as well. In the perspective of personal space and personal privacy everything is about the distance or the lack of distance and how to deal with it. Quality in dense areas deals with this distance and designers need to be aware of these aspects.

Discussion

The lack of space in the cities in combination with the economical problems forces designers to think in a different way about the home in the city. Residential buildings more often are designed in high density. The desire of men for privacy is one of the aspects to deal with designing residential buildings. If people are forced to live in a condition of crowding, as Erwin Altman describes, this could have catastrophically consequences. Knowledge about the invisible spaces people need to protect their personal privacy could help to design a home in the city with high quality for the inhabitants. It is an enrichment to take this aspect into consideration.

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