

**Privacy and depth configurations.**  
**Proximity, permeability and territorial boundaries**  
**in urban projects**

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**Abstract**

In this paper, depth is considered the main parameter to measure the quality of urban space: it refers to the gradual sequence between adjacent, overlapped or integrated private or public territories in urban projects. This paper pronounces a theoretical and conceptual discourse about the organisation and depth of collective spaces, tested by rereading historical and contemporary urban projects. Theories and models of proximity, permeability and territorial boundaries are linked with the idea of depth configurations in architecture (considering different depth sequences as simultaneous and multiple experiences and inherent organisations of space), together with their spatial, social, cultural and environmental conditions. Privacy (understood as the desire or need to avoid sharing space) is one of the main issues in this discourse, as it depends on the level of collectiveness within a depth configuration, more than the level of explicitness of defined territorial boundaries. This paper wants to prove that depth configurations (and levels of privacy) are not exclusively based on the traditional private/public property distinction but depend on the amount, the nature and the structural qualities of collective space, together with several spacing mechanisms. The urban project's quality depends on the multiplicity of the depth configuration: multiple reading of the space's permeability enriches the urban experience on an individual and a collective level. In other words, the concept of depth configurations does not define a simple morphological discourse about linear quantitative sequences of crossing boundaries: the designing or reading of depth is placed within a more complex configuration of proximity, permeability, integration values and delimiting boundaries on a physical, visual and territorial level.

Privacy is related to depth: privacy, understood as the desire or need to avoid sharing space, can be considered an essential part of depth sequences in architecture. The illustrated urban sequences operating at different scales (Fig.1) demand a rather plural and non-judgemental discourse of coding and decoding depth sequences in architecture. As the examples show, some of them representing sequences in poor and dense residential neighbourhoods in Barcelona (second line), others referring to the popular Melrose Place typology in California, where rich kids share expensive and exclusive properties (fourth line), different models of proximity and permeability produce different types of depth sequence in urban space. Depending on the case, these sequences can be long or short, intense or boring, obtain an irregular or a flat profile, allow slow or fast movements, have a linear or a rather multiple structure and can gradually or irregularly increase or decrease levels of privacy. We could state

that it is the very need (or desire) for privacy drives territorial mechanisms in space: multiple agents operate at different scales to provide a variety of models of depth in contemporary landscapes, describing sequences zigzagging between public and private spaces. However, it is important to consider the distinctions between public and private spaces as complex devices, used in many ways, as they are more than single physical barriers in urban space.

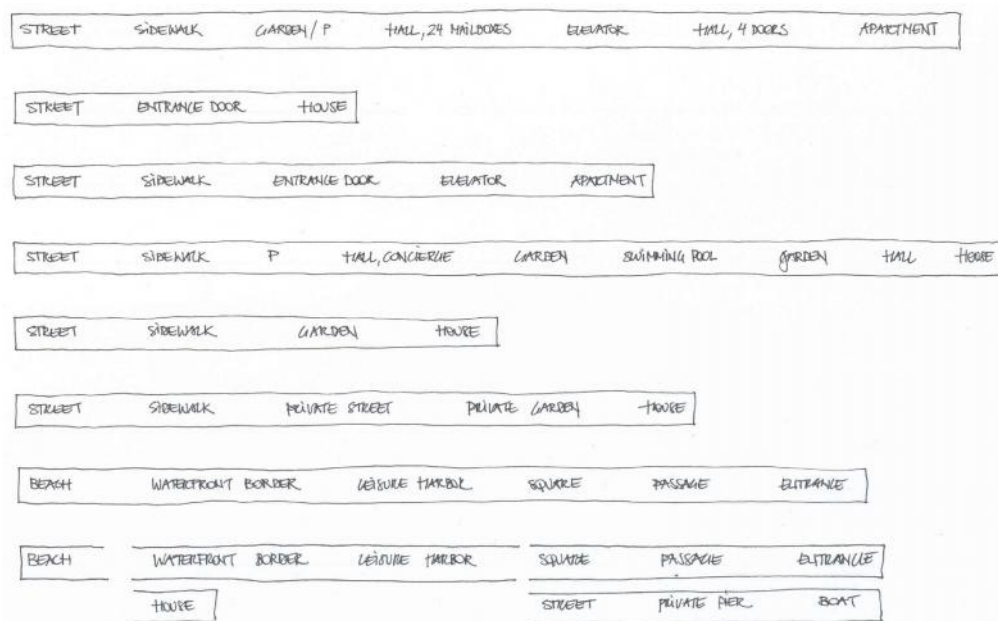


Fig. 1: *Examples of different housing typologies or urban projects, illustrating depth sequences starting from a more public level (the street) to the most private one (the entrance to a residence) (by Kris Scheerlinck)*

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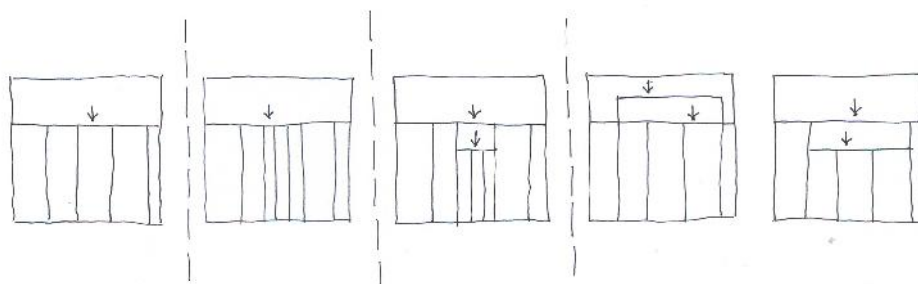
## Depth

The relation between private and public spaces is defined by sequences with different lengths, different intensities and various ways of reading them. According to Habraken, the built environment is defined by a territorial organization and is founded on the principle of inclusion within other territories. The author presents a diagram to relate this very principle of inclusion to transitions between private and public spaces (Fig. 2).

Imagining different ways to access those theoretical territories, Habraken defines the concept of territorial depth :

Territorial depth is measured by the number of boundary crossings (...) needed to move from the outer space to the innermost territory <sup>1</sup>

As a result, territorial depth increases when collective spaces (like shared vestibules, common gardens, etc.) are introduced within the multiple sequences. However, territorial depth is not a static parameter: within a certain time framework, after the intervention of various urban agents, depth can increase or decrease in time, according to the specific characteristics and dynamics of the built environment.



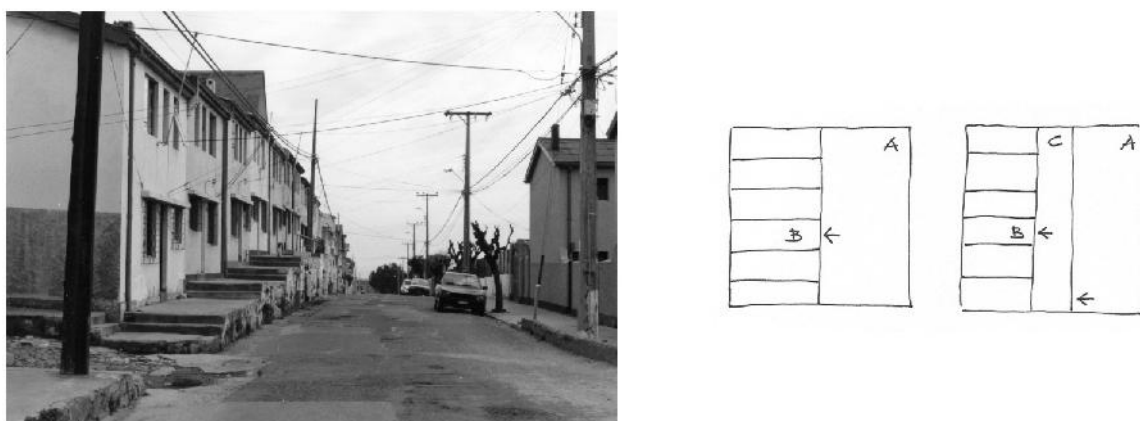
*Fig. 2: Increase in territorial depth, considering the strip indicated in the above part of the diagrams as public space and the below part as private space (diagram made after Habraken 1998, 215, fig. 12.8)*

Habraken relates the possible increase in territorial depth to changing density. The diagrams in Fig. 2 describe different scenarios of increasing depth: the first one from the left represents a system of simple included territories. Starting from this basic territorial division, different scenarios are explained. Increasing density sometimes leads to nothing more than an intensification of available private space (second scheme to the left): territorial depth is not increased, unlike the process of densification. However, in some cases, densification does generate an increase in territorial depth (third scheme, in the

<sup>1</sup> Habraken 1998, 137.

middle). Besides intensification of use, meaning subdivision of territory, a zone of shared or collective space was created before entering the new individual territories. Here, territorial depth increases as you cross more boundaries when you move from outer space to innermost territories.<sup>2</sup> In the following scheme (second to the right) we see how included territories occupy public space to make it their own, while the last diagram explains how included territories sometimes sacrifice some of their own space to create shared space. These two scenarios do not contemplate densification of the urban system to increase depth. In other words, increasing depth is directly related to the creation of collective or shared spaces at different levels within the territorial hierarchy. Shared spaces can be common courtyards or vestibules, gardens, storage or parking spaces, common playgrounds, corridors or passages. Some parts of the home can be seen as collective spaces as well, as the inhabitants accept to collectively appropriate those spaces.

Territorial depth is strongly related to the property structure within the hierarchy, even not exclusively dependent on it.



*Fig. 3: An example of increased territorial depth in Valparaiso, Chile. The territories A refer to the most collectively used space, B to the most individually used space, C as the additionally collective space. (diagram made after photographs in situ, Valparaiso, Chile, 2002, photo by Kris Scheerlinck, 2002)*

The idea of increased territorial depth is visible and readable in many urban projects, at a small scale as well as at a bigger scale, within different cultural contexts. In some cases, projects are designed or laid out in an intentioned way to increase or decrease depth, while in some other cases depth is a consequence of external factors like pre-existing site conditions. A case where topography or the absence of rational planning regulations caused an increase of territorial

2 Habraken 1998, 137.

depth is in some neighbourhoods in the city of Valparaiso, Chile, as shown in Fig. 3. The attached houses in this particular street were built before mobility needs obliged to cut through the neighbourhoods and trace wider streets. Obviously, the position of each house is in a specific relation to topography and constitutes a specific territorial organisation of space. To have access to one of the houses situated in the middle, one has to walk up a flight of stairs and pass by the neighbour's windows and front doors to enter the house. We could say that the proportion of shared space within this sequence is getting higher by this configuration. The chance you meet a neighbour or a visitor on a smaller distance is relatively higher than when the houses would have been built on a flat surface, creating in that case a more direct relationship between private and public zones. This particular model of accessibility can be found in many streets in the city of Valparaiso: because of its topographical conditions, shared space is a structural element within the urban fabric. It is important to mention that in this case no gates or fences appear to increase depth: they can be considered invisible territorial boundaries. It is obvious that in this case of increased depth, different levels of privacy are defined by this territorial organisation, on an individual as well as on a collective level. Many other cities, like London or Tel Aviv, seem to experiment with different depth scenarios, sometimes in a spontaneous or in a carefully planned way. Indeed, laying out depth sequences can sometimes be part of bottom-up participation processes and in other occasions be used as deliberate top-down approaches, where collective strategies are used for economical benefits primarily (e.g. higher real estate prices can be achieved when there is access to collective gardens).

## **Depth configurations**

Within the discourse on depth and on territorial organisation of space, Habraken distinguishes cases of dual orientation from cases of territorial overlap. Dual orientation refers to the double orientation that a room, a house, a property or a neighbourhood can have in relation to the more collectively spaces like outdoor spaces or communal areas (like a house that can be reached through two different public streets). The case of territorial overlap however is defined by dual orientation, as well as by the condition that the house or property gives access to a space with at least two different levels of collective use (like a street on one side and an alley with restricted access on the other side). The author recognises in the case of territorial overlap an added value for the urban fabric and its inhabitants, as more appropriation options are provided: the projects, in fact, can be read and used in different ways by its inhabitants, choosing the level

of collectiveness they want to be part of. We could conclude that, according to Habraken's hierarchical approach, depth is related to models of space organization in ever-changing aggregated, included or overlapped territories: defining and controlling access provides territorial control. The author adds that territorial mechanisms are not neutral processes but based on creating asymmetrical relationships: territorial control tends to establish vertical relationships that avoid equal or indifferent accessibility between different space users at all scales. Urban space with restricted or conditioned accessibility tends to be more stable than territories with no more than a potential access control. Within this territorial matrix, the desire for privacy and the need for security are protagonists. In other words, depth is the result of physical, visual and territorial spatial configurations.

Bill Hillier<sup>3</sup> presents a rather non-hierarchical understanding of space that allows the adoption of depth as a relative parameter: the author reads the built environment as a non-spatial system of (non)distributed elements. Here, no pre-orchestrated values are attached to the elements belonging to the depth configuration: his theory is not based on rank and order, as opposed to Habraken's (Fig. 4).

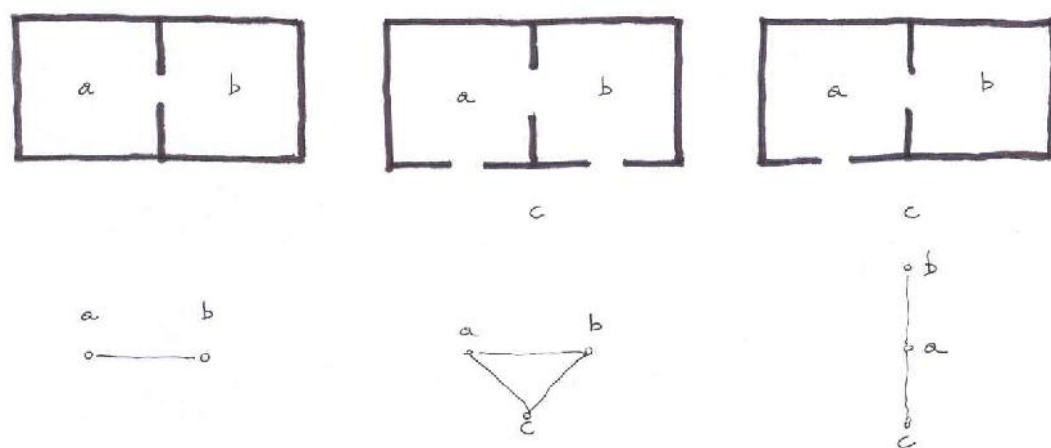


Fig. 4: *Depth configurations: the example of balanced (the relationship between area a en b is equal), circular (area a end b are related to each other by a circular movement) and linear depth (you need to pass through area a to go to area b) as a result of configuration (diagram made after Hillier 1996, 34)*

Hierarchical structures establish predefined values and inherent specific values to parts of the built environment: access through a main gate of an alley is more important than a secondary entrance at the level of the individual

3 Hillier 1996, 33.

property. Shared monumental staircases in a residential building obtain more structural qualities than the individual alternative. Here, multiple orientations exist, but its constituting elements are not understood as equal: there is a rather vertical organization of space. In a non-hierarchical model, however, the idea of a configuration as a set of spatial and social relationships between different elements becomes more important than hierarchy and its derived vertical strategies to control space. Flexible reading of the environment and its territorial meaning might indeed correspond to a rather horizontally oriented process, where inhabitants have equal multiple options of how to use space. Nevertheless, hierarchical as well as non-hierarchical reading of space and depth both suggest the existence of configurational systems, with several determining urban parameters and simultaneously operating agents. Both theories coincide in the importance of depth and the permeability within spatial configurations.

Related to the idea of space as a configuration of access, a coherent framework should be defined: access defines permeability in private and public properties. We should focus however on the way we use space in order to read and understand the qualities of depth configurations and disentangle the mechanisms to provide privacy. In other words, can we provide an updated definition of collective space?

## **Collective space**

Often, collective space is understood as a blurry and vague space, sandwiched between public and private properties. Many urban projects deal with collective space as if it were a strict synonym for in-between space, for transition or overlap, for interstitial space, always containing a soft and gradual spatial effect. However, in order to study depth sequences as part of physical, visual and territorial configurations, we need to redefine the concept of collective space in a more precise way: contemporary urban phenomena invite profound rephrasing of the theory about private and public space. Traditional public-private distinctions (simply based on property structures, that is, who owns the space, and not on the level of sharing within that space) might not explain contemporary territorial scenarios, where territorial specialisation and market-driven urban strategies define the way we consume space.

Manuel de Solà-Morales<sup>4</sup> questioned the traditional definition of public space: he wondered if public space should be publicly owned to have a collective dimension, and questions that it should be freely accessible by everyone. The author argues:

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4 de Solà-Morales 2008, 184.

It is a fact that the city is the very place where the private domain can be, and often is, a social domain- just as much as or indeed even more than the public domain.(...) Private buildings as public elements, radiating social meaning and value that extend beyond the actual buildings embody their urban character<sup>5</sup>

In other words, the very nature of the property, that is who owns the piece of land or the building, becomes less important than the way we use space. The author suggested extending the notion of public space to encompass new spaces such as parking lots, shopping malls, vacation centres and cinema complexes.<sup>6</sup>

He called these collective spaces and argued that architects should seek broader responsibility for their design: they should not concede their design to commercial logic and developer standards, but rather seek to transform them into challenging new fields of architectural investigation. de Solà-Morales described this task as the urbanization of the collective territory. The author continues:

the civic, architectural, urban and morphological richness of a contemporary city resides in the collective spaces that are not strictly public or private, but both simultaneously. These are public spaces that are used for private activities, or private spaces that allow for collective use, and they include the whole spectrum in between...<sup>7</sup>

de Solà-Morales suggests interconnecting private or enclosed spaces, to upgrade and to turn them into parts of collective realm: to include the particular into the sphere of the influence of the public.

This new understanding of the private-public relationship changes the character of depth configurations and proximity: this no longer depends on a simple public/private distinction but is related to the amount, quality and nature of collective spaces, that is, the spaces we collectively use. Depth understood as a successive crossing of territorial boundaries from public realm to private one, or vice versa, gets a different meaning if we apply it to the idea of collective spaces. The simple, clear and linear understanding of an urban sequence of approach shifts to a multiple, more ambiguous reading of depth in urban projects. This framework of collective spaces provides an interesting tool to disentangle the collective structure of urban projects, at different scales. A new urban theory, based on the combination and actualization of the ideas of depth, configuration, collective space and proximity, allows a new reading of urban projects, with focus on the collective strategies within. Independent from the scale, we can read sequences, studying the level of collective use with its

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5 de Solà-Morales 1992, 3.

6 de Solà-Morales 1992, 4.

7 de Solà-Morales 2008, 184.



relative position in the configuration, together with the way limits are codified and de-codified. Within the matrix of collective space, the position of boundaries becomes as important as the way we define them: a comparative study of the position of boundaries illustrates different outcomes for privacy levels.

## **Domestic sequences and privacy**

Habraken describes walking through ancient palaces as progressions of halls of great character, yet devoid of any formal indication responding to specific use.<sup>8</sup> He mentions that users of ancient palaces passed through space after space in succession, as corridors were unknown or rarely used. In a less rational way than we know now, the users settled into sleeping, eating, meeting others, working etc., without a formal functional distinction. The sequence was defined by spatial qualities of smaller or bigger, higher or lower, darker or lighter, enclosed or open spaces within the sequence. Habraken refers to the specific description of typological spaces like mezzanine, hall, attic, cellar, stoop, porch that all refer to space itself, as opposed to functional references we use currently. Habraken calls this the historical absence of functional specificity.<sup>9</sup>

The scholar explains that after the 18<sup>th</sup> century's rationalisation of the domestic scale, a fireplace became a dining room : functional specification took over:

(...) architecture supported inhabitation by offering a varied topography of spaces and forms. At times, the very entities to which people linked their activities - fireplace, window, sleeping alcove- were themselves like low-order forms, inhabiting the larger building.<sup>10</sup>

However, besides spatial qualities, there was another element defining depth in pre-modern domestic sequences, independent from this lack of functional specificity: the restriction of access, which introduced levels of privacy within the home. The author uses this references to claim that territorial boundaries between individuals and groups of people were more complex and fluid, for they were less dependent on walls and doors that became the current operating elements within functional lay-outs. He mentions that levels of privacy were neither attached to functional specificity (for example, a bedroom was not necessarily a space that had to guarantee privacy for its users). Indeed, within most classic palaces or pre-modern mansions, a clear indication was made

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8 Habraken 1998, 132.

9 Habraken 1998, 134.

10 Habraken 1998, 135.

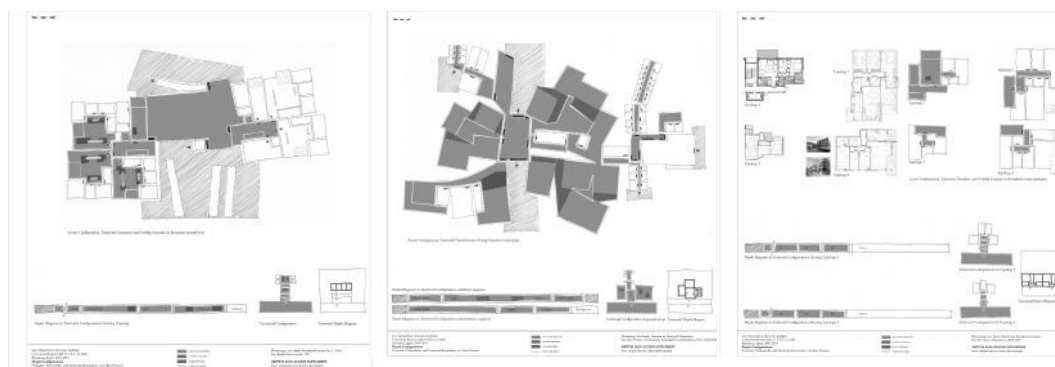
between private and public territories, or better said, between individually or collectively used areas: from the four-posted bed to rooms, hidden behind walk-in cupboards or decorative walls indicating different levels of privacy. Habraken refers again to included territories and mentions the importance of the disconnection of levels of privacy from functional references: an intimate space does not necessarily need to be a sleeping room, as it is often planned in recent projects.

Drawings or paintings representing daily scenarios within royal palaces or aristocratic residences before the industrial revolution show the clear indication of private territories within the bigger interior space, seen as a continuous public space with temporal restriction of access, illustrating the use of included territories. In pre-modern homes, it is interesting to see the adjacency of collective and intimate spaces without spatial differentiation, without separating circuits of access by using corridors (except from service corridors). Many territorial sequences then depended on subtle access configuration, the presence of abundant sequential gaps, overlap scenarios, but not necessarily showing long predefined territorial transitions. Besides that, we can notice that the most intimate area was not necessarily located at the very end of the domestic sequence or at the deepest part of the spatial structure: here deep territorial structures were combined with short physical and visual depth configurations. Proximity was time dependent and relative. Proximity, read as a coherent system of absolute distances, was less important than in modern lay-outs, as the spatial set-up there was defined by territorial configuration, which meant allowing or denying access with an extreme flexibility in time.

### **Coherent mapping: configurations of depth and proximity**

A systematic study of various historic and contemporary housing typologies (see Figs. 5, 6, 7) shows an interesting range of depth configurations at a domestic scale. For each selected housing typology, like Alvar Aalto's proposal for Interbau Berlin in 1958, a systematic drawing was made of its containing aggregated, integrated or overlapped territories with a later indication of (higher of lower) levels of collectiveness (originally yellow colour, printed in grey): only the most individually used territories are left blank (white) in the plans and corresponding diagrams. Territorial boundaries are indicated (thicker lines, indicating a change of accessibility or access restriction, e.g. between a corridor and an individual sleeping room), together with the detected overlap scenarios (olive green, here darker colour) and sequential gaps (proximity: spacing mechanisms, waiting areas or buffer zones between different spaces, indicated in

light grey colour). Within this series of domestic depth configurations, the more street-related area is indicated (see hatch) and to make it possible to compare different projects, this area is always seen as the relative starting point of measured depth sequences. This particular graphic method allows detecting different outcomes in relation to the amount, location and structure of collective space in the studied domestic depth configurations. The mentioned Alvar Aalto typology for example (Fig. 8) shows a systematic decrease of scale of the successive collective spaces (from the middle reception areas towards the peripherally located bedrooms) within the sequence, combined with overlap scenarios at the end of those sequences. In this particular housing typology, the proportion of collective spaces is much higher than the individually used spaces, and is differentiated in plan by a territorial suggestion of in-between space (and not by a wall or a door as an explicit territorial boundary).

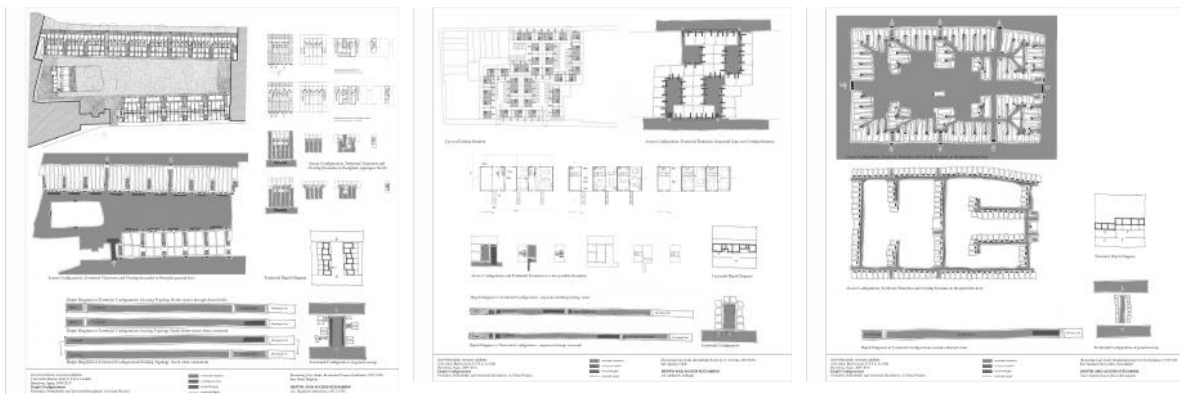


*Figs. 4,5,6: Examples of the study of the collective structure in urban projects at different scales: Alvar Aalto 1958, Berlin; Herzog & Demeuron 2004, Long Island; Barcelona Metropolitan Region 2008, real estate offers (by Kris Scheerlinck)*

The Herzog & Demeuron project for a museum shows a systematic use of in-between spaces in a regular way: this configuration of collective spaces can be seen as a set of sequential gaps, providing a territorial variation within the building. Some part of the project relies on overlap scenarios (the bigger areas, to be used by the public) while other parts (the administration area, based on sequences of smaller spaces) are based on linear and gradual increase of individual use of space with explicit territorial codification (walls and locked doors). In some mapped real estate projects in the Metropolitan area of Barcelona (offered apartments 2008), the proportion of collective spaces is extremely low, the configuration is based on corridor elements, territorial codification is explicit (no interpretation possible by its users) and the spaces

situated at the end of the territorial sequence (bedrooms, separated from the rest of the house) are always considered private areas, which does not invite a dynamic use of the apartment.

A similar analysis is done at the bigger scale of the residential cluster, illustrating introverted as well as centripetal organizations of space, or showing projects with more linear distributed collective spaces (see Figs. 8, 9, 10). For each project, an analysis was done to disentangle the territorial organization and the position and value of the collective spaces.



*Figs. 8,9,10: Examples of the study of the collective structure in urban projects at different scales: W.J. Neutelings 1990, Gent, introverted use of space; A. Aravena 2003, Iquique, centripetal strategy; M. Brinkman 1920, Rotterdam, ground floor introverted use of space, first level laid out as a linear structure (by Kris Scheerlinck)*

The various case studies, from domestic territorial scenarios till the study of urban configurations, show that depth does not exclusively depend on the amount of territorial boundaries crossed, neither on the amount of collective spaces within a sequence. It does depend on the way shared spaces are configured within a project: it is the integration value of the shared space that defines the quality of the depth configuration. Territorial overlap and multiple orientations seem to be important urban design strategies. Increasing the amount of collective spaces does not necessarily increase the value of depth: this depends on the configuration of proximity and permeability of the project at different levels, together with the nature of applied tactics of space codification. Territorial suggestions affect depth differently than explicitly defined sets of boundaries. However, looking at more recent urban projects, a decreasing level of complexity is detected in their depth configurations, with less subtle territorial codification, almost not allowing any user's interpretation. Many urban projects do not present longer or shorter depth configurations but in many occasions obtained a much simpler configuration, compensated by explicitly defined territories. Most recent urban projects show less multiple-choice strategies and

are more functionally based. In many projects, the integrated value depends increasingly on corridor elements and pre-planned territorial transitions, avoiding overlap scenarios. The private areas are situated at the end of the pre-planned sequences. In many cases, privacy is only guaranteed by explicitly defined boundaries with no interpretation of the use of space.

As a last series of analyzed urban projects, some streetscapes in Barcelona and New York were used as case studies for studying various collective strategies, some of them as an informal or even accidental mechanism, others as part of a more formalized and intentioned design (Fig. 11).

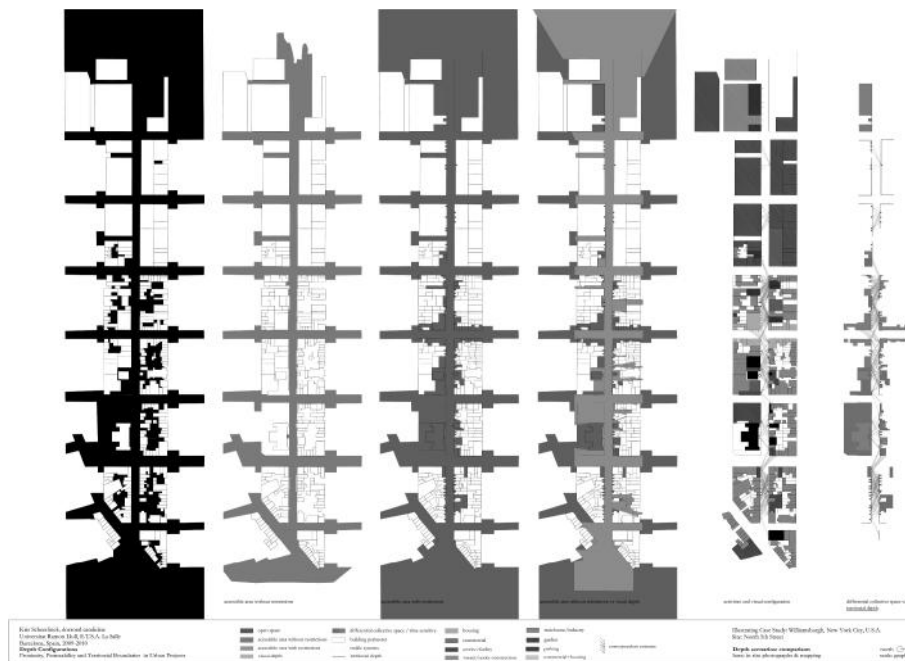
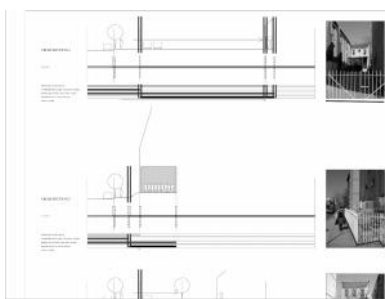
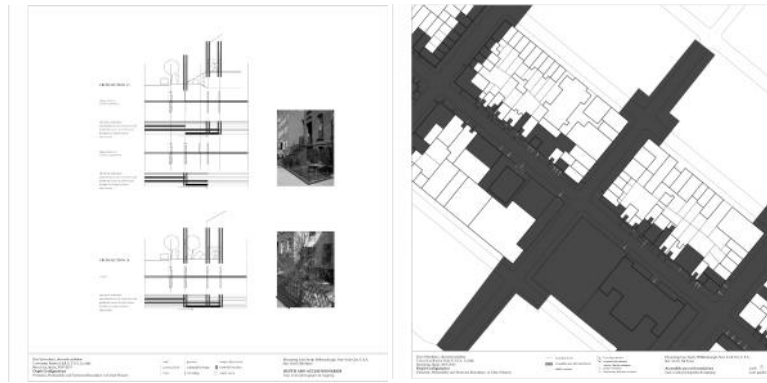


Fig. 11: Example of comparative scheme of Open Space, Public Property, Collective Space, Visibility Diagram, Functional Diagram with Visual Integration and (Differential) Collective Space in North 5th streetscape, Williamsburgh, New York City, USA (by Kris Scheerlinck)

Different tactics of delimiting territories introduced the existence of territorial layers within the different streetscapes, where the visual integration of these depth configurations was studied and compared to evaluate social control, privacy levels and the available flexibility of use (Figs. 12, 13, 14).





*Figs. 12,13,14: Examples of depth mapping and detail of Collective Space map included access restrictions, indication of time dependent filter tactics (by Kris Scheerlinck)*

As opposed to the use of flexible and open ways of codifying and configuring space, some case studies illustrate an extreme obsession for security and privacy, sometimes leading to violent restrictions of access, though not improving any human comfort level. The analysis by one of the participants in the MPIA seminar on Collective Spaces at LaSalle (Barcelona), Oscar Chavez, showed a transformation of a residential neighbourhood in Chihuahua, Mexico (Fig. 15), and illustrated how fear for insecurity, together with the desire to climb the social ladder, transforms our built environment, more than traditional planning principles.



*Fig. 15: The case of Chihuahua, Mexico: before and after the closing of the public streets in the neighbourhood (plan and pictures by Oscar Chavez, MPIA LaSalle Barcelona, 2010)*

The case study showed how the inhabitants of a couple of streets within one neighbourhood decided to close off the streets and (illegally) transform public space into a highly controlled but residual urban space. All owners of a property now pay monthly for a private security guard to exclude unwanted visitors from their neighbourhood's guest list: fences and *casitas de guardia* (security pavillions) were constructed, all on public property. As a result, we can find some existing property with dual orientation that now is bordered asymmetrically: one side of the property still faces a not (yet) privatized street while another part of that same property does have a safe border. This is a clear example of territorial overlap, where a property is defined by dual orientation and where each entrance belongs to a sphere with a different level of collectiveness (in this case a public area with no access restriction on one side and a restricted access area on the other side). Interestingly enough, unlike the reinforcement on one side of the property, one can still enter from the dangerous part: the fencing off cannot produce more safety. In other words, territorial overlap becomes a case of boundary redundancy. Safety and security seem to have become an image issue, providing social status (independently from some existing threats or problems in the neighbourhood).

Mapping the collective structure of many urban projects at different scales allows a more critical understanding of depth configurations and their socio-cultural conditions: different models of proximity interfere in the lay-out, the reading or the experience of depth.

### **Conclusion: collective strategies**

Depth configurations are not exclusively based on the traditional private/public property distinction but depend on the amount, the nature and the structural qualities of collective space, together with several spacing mechanisms. The urban project's quality rather depends on the multiplicity of the depth configuration: multiple reading of the space's permeability enriches the urban experience on an individual and a collective level. The guarantee for privacy (understood as a desire to not always be part of an all-round collective space) does not depend on how explicit we define territorial boundaries but on the way we configure space, the way and where we define access to neighbourhoods, properties, buildings or rooms. The use of higher walls, building the entrance door at a higher distance from the street, define in a forcing and singular way how people should access or use their rooms, houses or neighbourhoods, does not guarantee a qualitative level of human comfort.

The concept of depth configurations does not define a simple morphological discourse about linear quantitative sequences of crossing boundaries: the designing or reading of depth is placed within a more complex configuration of proximity, permeability, integration values and delimiting boundaries on a physical, visual and territorial level.

### *Bibliography*

- Chastain, T. and Chow, R., 1999. *Designing Density. Transformations of Urban Form*. Firenze: Alinea Editrice, FK2.3-FK2.6.
- Chow, R., 2002. *Suburban Space, the Fabric of Dwelling*. Berkeley: University of California Press.
- De Syllas, J., 1994. *Living in the Community: a Study of the Domestic Life of People with Learning Difficulties Living in Local Authority Hostels*. Athens: NHS Estates.
- de Solà-Morales, M., 1992. *Public and Collective Space, The Urbanisation of the Private Domain as a New Challenge*. La Vanguardia, May 12th, 25-6.
- de Solà-Morales, M., 1992. *Public and Collective Space, The Urbanization of the Private Domain as a New Challenge*. Oase, 33, 14-18.
- de Solà-Morales, M., 2008. *Public and Collective Space, The Urbanisation of the Private Domain as a New Challenge. A Matter of Things*. Rotterdam : Nai Publishers.
- Habraken, N.J., 1984. 'Notes on Hierarchy in Form', edited version of paper for project on *Form Hierarchies*, Department of Architecture, Massachusetts Institute of Technology.
- Habraken, N.J., 1987a. 'Control Hierarchies in Complex Artefacts'. *Proceedings of the 1987 Conference on Planning and Design in Architecture at the International Congress on Planning and Design Theory*, Boston, MIT, American Society of Mechanical Engineers, 84-8.
- Habraken, N.J., 1987b. 'The Control of Complexity'. *Places*, 4.2, 5-12.
- Habraken, N.J., 1998. *The Structure of the Ordinary*. Cambridge: MIT Press Cambridge.
- Habraken, N.J., 2002. 'The Use of Levels'. Keynote Address Unesco Regional Seminar, Seoul, 1988, re-issued *Open House International*, 27.2.
- Hanson, J., 1998. *Decoding Homes and Houses*. Cambridge UK: Cambridge University Press.
- Hillier, B., 1996. *Space is the Machine*. Cambridge UK : Cambridge University Press.
- Hillier, B. and Hanson, J., 1984. *The Social Logic of Space*. Cambridge UK: Cambridge University Press.
- Mackay, D., 1980. *Viviendas Plurifamiliares, De la Agregación a la Integración*. Barcelona: Gustavo Gili.
- Madanipour, A., 2003. *Public and Private Spaces of the City*. London: Routledge.
- Monteiro, C., 1997. 'Activity Analysis in Houses of Recife, Brasil'. *Proceedings of the First Space Syntax Conference 2*, 6-9.
- Peatross, F., 1997. 'The Spatial Dimension of Control in Restrictive Settings'. *Proceedings of the First International Space Syntax Conference 2*, 12-15.
- Scheerlinck, K., 2010. *Depth Configurations. Proximity, Permeability and Territorial Boundaries in Urban Projects*. Doctoral thesis published at <http://www.tesisenxarxa.net/TDX-0203110-102626/>.