

# **A study into how the relationship between public and private spaces in the built environment influence the social and cultural aspects of the community.**

**BK6AC3 Academische Ontwerpreflectie  
Bouwkunde, Technische Universiteit Delft**

**Paul Varghese**

4472152

p.varghese-1@student.tudelft.nl

**5<sup>th</sup> June 2019**

**Dr.ir. LHMJ Lousberg**

---

## **Abstract:**

Architects have always found it important to understand the interaction between public and private spaces in the context of the built environment. This paper investigates the relationship between public and private spaces, and how it influences the social and cultural aspects of the built environment. Hence, we first explore what a public and private space is, and how it is defined. From this we investigate the concept of creating an identity within a public space, the formation of social gathering spots, and the necessities of private spots within the public domain. The results of this research paper show that design concepts that are specific to the psychological aspects of human behaviour can shape the social and cultural pattern of the built environment.

---

## **Key words:**

Public and Private Spaces, Materialization, Architecture, Built Environment, Urban Planning, Boundaries, Social Identity

---

## **1. Introduction:**

The relationship between man and his built environment is referred to as architectural anthropology (Yimsrual, Supakit, 2013). For an architect has to design the built environment keeping in mind the psychology and culture of people in order to achieve the desired social behavior (Yimsrual, Supakit, 2013). This paper investigates these concepts of architectural anthropology in the design project of BK4ON4, which required urban planning in the area of Steelvierstraat located on the Osdeorper Ban in Amsterdam Nieuw-West, Amsterdam, The Netherlands. The research method adopted included several approaches. A preliminary study of the area helped in understanding the contextual qualities and problems of the area, and how some of these aspects/qualities could influence the design of the project. Some of the qualities that were investigated were: the number of open public and private's spaces, the use of materialization, the functions of the area, the connectivity to the area, and the age group and type of people that visit the area. These aspects were then investigated through pictures, drawings and scale down models to either create, renovate, or redevelop the surrounding contextual area. The use of plans, maps and models of Steelvierstraat including its buildings aspects of public and private domains such as landmarks, parking spaces, connectivity, identity, and materialization of the spaces were understood. These were then compared to the statistical reports by the municipality of Amsterdam. Based on these findings a target group that would be best suited to stay in the area was identified. This target group consisted of individuals such as students, starters, young professionals, and small to medium sized families with one or two children.

Having identified the target group, the following sub-research questions were formulated:

1. How can public and private spaces be defined in a built environment?
2. How are the boundaries between public and private spaces defined in the built environment?
3. How does the spatial and functional organization of the built environment help in creating an identity of the built environment?
4. How does the identity of the built environment develop the social and culture of the community?

Through these sub-research questions, the main research question was formulated to be:

***“Does the relationship between public and private spaces in the built environment influence the social and cultural aspects of the community?”***

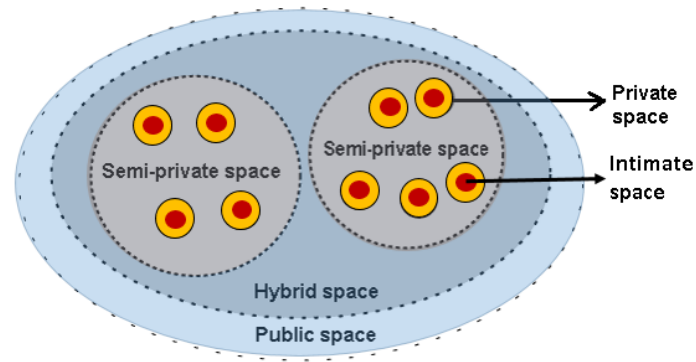
To help answer the main and sub-research questions, this research paper investigates different theories and interpretations available in through literature. In the next phase of this research the data collected from the diverse sources mentioned above, and the concepts investigated through literature, are used to highlight design aspects that relate to the public and private spaces. Hence, this research paper describes the investigations leading to the process carried out in the design cycle, and the design of the built environment.

## **2. Analysis:**

To answer the main research question, we need to first solve the sub-research questions. The first sub-research question being:

***How can public and private space be defined in a built environment?***

If we look up the definition of private and public spaces, we get the following result: “a private place is open to those permitted by law or custom (Birch and Eugenie 2010). It is the space immediately surrounding a person, and which they psychologically regard as theirs” (Carney 2007). In contrast, “a public place is accessible to all citizens, for their use and enjoyment” (Carney 2007). Historically societies have payed attention on the creation and maintenance of public space, while the demarcation of public and private areas, is sometimes vague. A study conducted by Laughling and Johnson (2011) tells us that a public space within a neighbourhood are defined in terms of accessibility and a sense of belongingness that the residents share. Hence, from these definitions we can state that a public or private space is defined by (a) its accessibility (b) by the sense of ownership (physical or psychological) it imparts to its residents. Hence, even though private and public spaces are defined by their sense of ownership and its ease of accessibility, one must not forget that public space still reflects its form and function onto the surrounding urban development in the built environment and vice-versa (Nissen 2008). Chermayef and Alexander (1963) proposed “Anatomy of Privacy” that illustrated this definition as spaces having hierarchy and being linked to one another while retaining in their own identity. Lawrence, (1982) showed that the position of spaces leads from the most accessible public space to the most private functional and psychological space. Innermost to the private space is the intimate space which relates to the most intimate experiences of the individuals, where an intimate level of privacy is available to the individuals (Madanipour 2014). Social Spaces or Hybrid spaces: is seen as a space that revolves around a group of personal or private spaces and has multipurpose function of social significance. For these spaces have functional and social significances of growing importance in its current society (Nissen 2008).



*Fig 1: Adapted from WAUA 2008.*

Hence, the BK4ON4 designs organized the built environment of Steelvierstraat into a hierarchical spatial organization of intimate and private spaces such as the dwelling units; semi-private spaces such as corridors and lobby of the apartments, bicycle and car parks; hybrid spaces such as multipurpose recreational space; public spaces such as playgrounds, skateboard park, football/basketball-courts and café/restaurants. For these spaces are defined based on the sense of varying levels of ownership and freedom (physical or psychological) they convey to the residents, and its ease of accessibility. (See Fig 5a and b in the Annex)

This brings us to the second sub-research question, being:

***How are the boundaries between public and private spaces defined in the built environment?***

Chermayef and Alexander (1963) discuss and illustrate the diverse spatial characteristics of transitions and thresholds which act as strong and clear physical barriers separating the private and the public spaces. In general, they suggest that the transitions between spatial boundaries often are ambiguous and unclear, because they are subjective, suggestive and changeable in form. Private and public spaces extend into each other to mix and form hybrid spaces that bridge private and the public way of lives (Chermayef and Alexander, 1963). Hence, these hybrid spaces assume multipurpose functions that are highly important in the modern society. In contrast to a sociocultural perspective, the psychological implications of boundaries and hybrid spaces are fundamental, as they have the capacity to prevent or facilitate passage and communication between spaces (Chermayef and Alexander, 1963). This research classifies boundaries as strong boundaries and diffuse boundaries (Sfinteş, Anda-Ioana 2014). Hence, with the understanding of these concepts in public, private and hybrid space, I was able to create an Architecture, Urban and Landscape plan that showed an organic hierarchy from public to private spaces by using three different types of boundaries, which are described below:

(1) **Strong Boundaries** mark the need for clear separation between private and public space, thus the passage/access of people and goods, and communication between private and public space is highly controlled and filtered, defining clearly different functional and social identity of the spaces. The strong boundaries of the exterior walls of the apartment block clearly demarcates the private from the outside space. The main entrance to the apartment block is the boundary between inside and outside. The entrance and the common space immediately adjacent to it (lounge) has a spatial order and purpose: it is intended to regulate the access of people and objects between private and public domains. The apartment block consists of individual apartments that constitutes private and intimate spaces in the design. Hence, strong and clear boundaries of physical barriers such as walls separate the different spaces within an apartment of the block. (See Fig 6 in Annex).

(2) **Diffuse Boundaries** are blurry boundaries that emphasize the communication, continuity and overlapping of the private and public spaces. These boundaries within the built environment can be created by using differences in materialization, vegetation and topography

- **Materialization:** Although strong and clear boundaries mentioned above give a sense of privacy and security, being completely isolated from the exterior can rise anxiety and social unrest in the residents as they still require to be connected to the external environment. Hence, every apartment is provided with a glass balcony to provide visibility and communication to the exterior. Other instances where I have used materialization for creating diffuse boundaries are by using different materialization (in colour) between the pedestrian walkway, the cycle-path and the vegetation. These created visual boundaries within the plan that visually separated private space from public.
- **Vegetation:** The use of vegetation also helped in this process where two different types of grass species (having two different green shades and forms) were used along with small fences and bushes that acted like a physical diffuse boundaries between the private garden space immediately outside the apartment block and the public spaces in the landscape.
- **Topography:** Shifts in the topography were also used to my advantage, where a shift from higher to a lower topography was used as a diffuse boundary between private the public space.

Hence, these two types of boundaries (strong and diffuse) can be identified to be connected to certain contexts and functions. Between the public and the private spaces, the social or the hybrid space may also act as kind of a diffuse boundary. These boundaries are having a negotiating function while combining the characteristics of the neighbouring private and public spaces. It is continuously subjected to changes from the two neighbouring spaces as a result of which it is constantly redefined and covers a wide range of contemporary socio-spatial functions (Chermayef and Alexander, 1963). For example, in my landscape design hybrid space with a social role use space in an informal way for everyday outdoor experiences and activities. In my opinion, although hybrid spaces are accessible with little or no restrictions, for these spaces to be enjoyed by the residents it is important to bring a sense of privacy and belongingness to individuals and families accessing these spaces. Skov (2016) introduces street furniture such as bridges, chairs, benches, trash-bins, fountains, lampposts, etc. Following this example, I introduced street-furniture such as lampposts, benches, etc., for the residents to enjoy, relax and conduct recreational activities within these hybrid areas. The use of green (trees and vegetation) within these spaces also helped in emphasising the area to be accessible and recreational.

This brings to the third sub-research question, being:

***How does the spatial and functional organization of the built environment help in creating an identity of the built environment?***

Thus, it can be understood by us that very few times a space in the built environment is either entirely public or private, rather these spaces overlap and intersect each other with blurred boundaries creating multiple dimensions of space and degrees of accessibility.

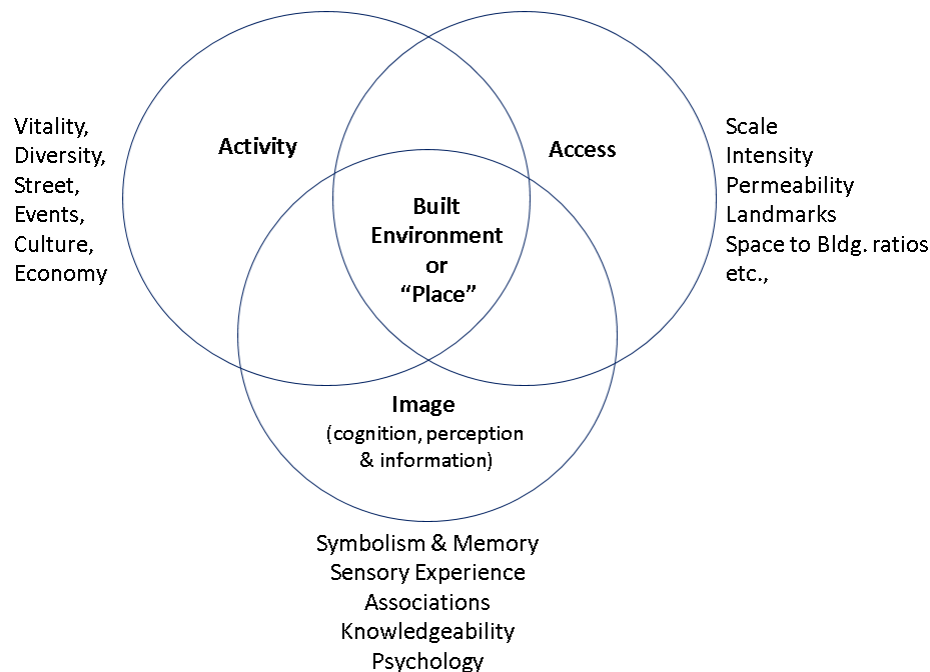
The concept of space (private and public) is further improved by Amin (2008) when he adds the component of “function” to the above concept of space. Hence, according to Amin it is not only the spatial organization of the built environment, but also the functional utility of public space that influences public behaviour and thereby develops sociocultural identity of the built environment. For the functional utility of space relates to the different activities that are available in the public space that meets the needs of the residents of the community, such that they can carry out their daily activities efficiently. This not only impacts the society, but also the economy, and culture of the community (Amin 2008). This theory is in line with the theory of Montgomery (1998). According to Montgomery, the built environment encompasses of activity, form and image (1998), and each of these three qualities play an equally important role in building an identity of the place or the built environment.

(1) **Activities:** As per Montgomery (1998) activities are one of the three basic requirements in a place / built environment that helps to build a “sense of place” among the residents. Activities give a reason to people for visiting the public space and as per Montgomery (1998) activity has two related concepts: vitality and diversity. Vitality of a place is the “liveliness” of the place and is dependent on the number of people at any time in that public space. The streets, the cultural atmosphere, the events, and the economy (café,

restaurant, shops, etc) all contribute to the vitality of the place. On the other hand, 'diversity' refers to the various uses or “mixed use” of the place such as movement, recreation, residence, business etc (Montgomery, 1998).

(2) **Access:** Accessibility to a place is its visual and physical connection to its surroundings Montgomery (1998). Permeability is most important and refers to the pavements, streets, cycle paths and roads that permeate the place or link the place.

(3) **Image:** How a place is perceived by its residents and visitors constitutes its image. This perception is based on the values, experiences and beliefs of the individuals (Montgomery, 1998), and how individuals in the place develops an identity of its own with respect to the place.



***Fig 2: The qualities of the built environment that build an Identity of Place  
(Adapted from Montgomery, 1998)***

In a study conducted by Shawket (2016) human interaction between each other, between them and the physical elements of the space, give the sociocultural identity of this space. Hence, according to Montgomery (1998) and Shawket (2016) it can be concluded that spatial and functional organization in the built environment can create its socio-cultural identity.

Thus, I applied these concepts of public space in the design. The problem I faced with the area in study (Steelvierstraat) was that the morphological form of the buildings and the urban public planning was the same for each neighbourhood within the area. Hence to create a public space that was differing from the rest of the neighbourhoods such that it had its own identity I decided that a public landmark was required. This public landmark was a fountain within the lake. Since the fountain is an interactive object not only will it be a landmark for visitors to identify the neighbourhood, but it will also help in creating an interaction. This will allow for diverse people to come and gather within the area around the lake, café and restaurant. Thus, when a new design or an improvement in the visual aesthetic value of a public place takes places, such as with the addition of the fountain, it results in creating a strong visual identity for the area. This in-turn also helps in creating an iconic, landmark for people to easily identify.

The access and linkage in the built environment create the dynamics of public spaces such as streets, squares, parks, and other spaces that can facilitate gathering of residents, and can in turn impact the sociocultural behaviour of those gathering in these areas. For activity in the built environment interactive recreational features were added within the plan such as playground, skate park, and sports ground (football/basketball). Placing these facilities within the area will increase the activities of leisure and recreation within the public area and will play a key role in defining its identity. These additions create diverse spots within the public area for people to interact with and to create their own sense of belongingness within the area (mini-informal private spots within the public area).

This brings us to the fourth sub-research question, being:

***How does the identity of the built environment develop the culture of the community?***

The perception that individuals have of a place establishes the bond he/she develops to that place (Brown et al., 2003). There are two types of bonds developed between the individuals and the place that bring about a sense of belonging to the built environment or “sense of place”, and they are:

(1) **Place Attachment:** Is a positive emotional bond that an individual develop to the places with which they have close contact with, such that the individual feels safe and tends to remain and invest his time and money in that place (Brown et al., 2003; Giuliani, 2003).

(2) **Place Identity:** Originates from the identity of the place, and from the individual being part of this identity (Sharifi & Murayama 2013; Pretty, Chipuer, & Bramston, 2003).

Hence, the feeling of belonging is a fundamental human need (Maslow 1954) and is related to the social wellbeing of the residents of the community. This understanding is verified in Lefebvre's work (1974) where he formulated a spatio-social concept that says that space is connected to social relations between the residents of the community. According to Lefebvre (1991) space can be physical, psychological, and social that always coexists. He explains that space is not only a ‘container or a box’ for social relations, but space is also shaping the social relations, place attachment, place identity and a sense of belonging among the residents of the community. This sense of belonging is also a “social identity” (Tajfel & Turner 1979). As per the concept of social identity, the residents of the same community share the same sense of belonging and are involved in common social activities and behaviours.

Therefore, it can be understood that the culture of the community is the sum of the “sense of place” and the “social behavior” of all the residents of that community. As a result, space and spatial organization of the built environment is capable of being used by architects and urban planners to shape the culture of a community.

Hence, with the spatial organization of the BK4ON4 design project, space was separated into intimate and private spaces such as dwelling units; semi-private spaces such as corridors and lobby of the apartments, common bicycle and car parks; hybrid spaces such as multipurpose recreation spaces; public spaces such as children's playgrounds, a skateboard park, football/basketball-cafe and café/restaurants; and landmarks such as a lake and fountain. This spatio-functional organization of the built environment and the physical amenities provided accessibility to the place; vitality and diversity in land use; and landmarks for symbolism and cognitive / sensory perception. These features build a positive emotional bond of attachment to the place” in the residents. They also contribute to “place identity” that originates from the identity of the place and from the individuals being part of this identity, such that the individuals develop a feeling for the physical and psychological identity of the built environment and to other members of the community. Hence, I was able to create multiple areas of interest for individuals and groups to socialize and interact with. Therefore, these features of the built environment encouraged both private living and social interaction among the residents of this community, such that the residents developed both an “individual identity” and a “social identity”. This shaped the “residential” and “recreational” culture within the built environment, which brings about a peaceful, creative and interactive social behaviour among the residents and their continued stay and investment in the place.

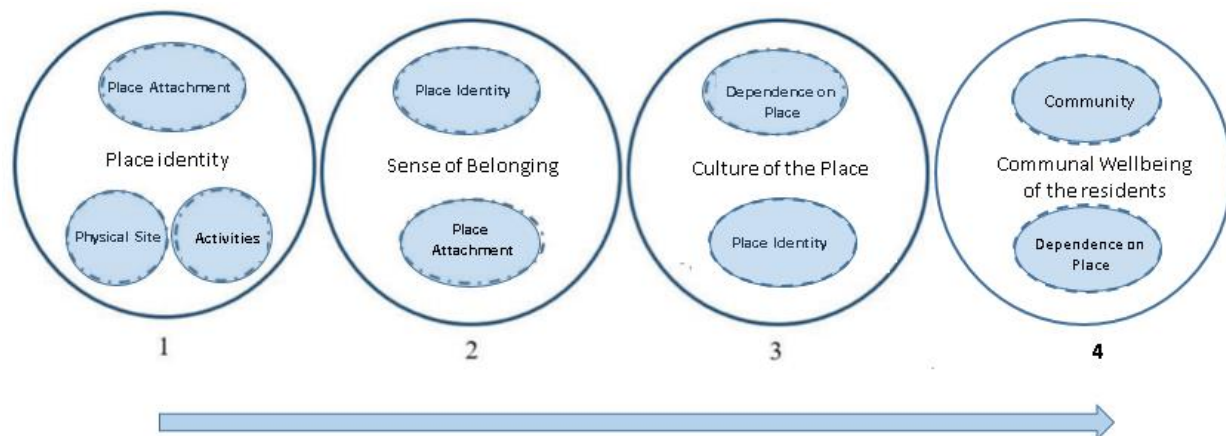
### 3. Discussion:

The built environment is created by the architects/ urban planners and is interpreted by its residents and visitors (Irwin 2001). It is to be remembered that in the planning of the built area, the application of the anthropological concepts of private and public spaces is crucial. This research paper defines private and public space and understands their interrelationship in creating an identity for the community and the built environment. The approach followed in this research paper is as follows:

1. Illustrating how some social anthropologists and social psychologists have interpreted private and public spaces and the relationship between them.
2. Showing how these concepts can be applied by using design elements that support this definition and interpretation, and how the application of these concepts has enabled the creation of private and public spaces.
3. Understanding how the application of these concepts can create a sociocultural identity of the community and the built environment.

This approach has helped to define, interpret and translate into my design project the private and public space based on two aspects (a) its access (b) the sense of ownership (physical or psychological). One must also not forget that private and public spaces have hierarchy and while being linked to one another retain their own identity. The hierarchy of spaces in position leads from the outermost space being the most accessible social and public space to the innermost space which is the most intimate space. There are physical barriers separating the private and the public spaces which can be strong and clear indicating total isolation between the two spaces; or as often seen they are diffuse facilitating communication and passage between the two spaces. Often private and public spaces extend into each other to blend and form hybrid spaces that connect private and the public way of lives. Hence, these hybrid spaces assume new functions of providing informal everyday outdoor experiences and activities. In my opinion, hybrid spaces are highly important in the modern society and have a meaningful social role.

The concepts of space can be applied in the design of the built environment by using design elements that support the above discussed definition, interpretation and interrelationship of private and public space. For example, while walls can be used for hard boundaries, differences in materialization, vegetation and topography can be used to develop diffuse boundaries. While parks, café and recreation facilities can develop interactive social behavior among the people, benches, and other private sitting spots can help in providing private, personal, or intimate spaces to people within these public spaces. Thus, while private spaces should be designed for intimacy and isolation, public spaces should be designed to provide opportunities of activities for a wide range of people. In this way, the built environment would not only support people's personal and intimate character, but the shared events build people's social relationships.



*Fig 3: Relationship between Place Identity, Sense of Belonging, Culture of the Place, and Communal Wellbeing of the residents. Adapted from Hernández et al., 2007.*

Built environments that promote social interaction and participation will also develop a sense of place. Such a sense of place results in the creation of a sociocultural identity of the community and the built environment. Erikson (1968) focused on the idea of identity and defined an individual's identity as "a process located in the core of the individual and yet also in the core of his communal culture". Hence, people need both privacy and social interaction, where physical environments can help or hinder these. In instances where the physical environment does not provide the personal intimate space within its public spaces, it would also fail to provide the individuals with a sense of belongingness. Hence, a communal culture which develops a sense of belonging, common values and behavior leads to the willingness in its residents to invest time and money in the built environment. Such a built environment will meet the fundamental requirement of sustainability by developing a sustainable social environment, that would result in sustainable economic development, which in turn would result in an equitable (fair, harmonious) social environment that will encourage tolerance among the residents to diversity (economic, social, religious, ethnic etc.,) (Dirsuweit, T. 2009).



*Fig 4: Sustainable urban planning. Adapted from Naida (2018).*

#### **4. Conclusion:**

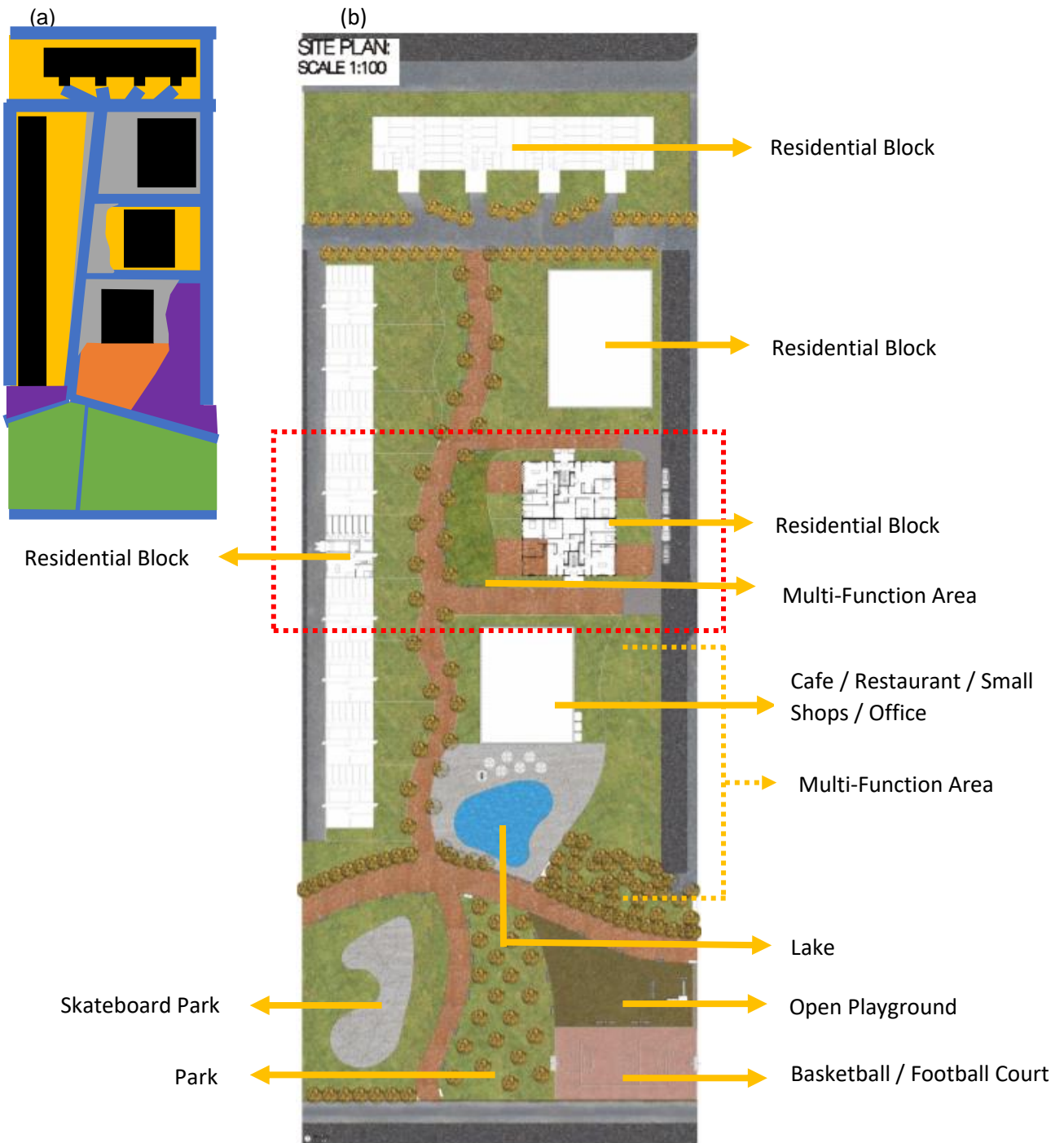
From the literature it can be concluded that, the spatial organization of a built environment is the fundamental criteria that forms the "culture" of the community. In this paper, I have attempted to explore how the private and public spaces of the built environment affect the socio-cultural behaviour of the community. This was achieved by understanding and using the concepts of social anthropology in the design of the built environment in Steelvierstraat in BK4ON4 project, such that it creates a sociocultural identity of the community and the built environment. From these concepts and the design project it can be concluded that the relationship between public and private spaces are rooted in the psychological aspects of individual-social behaviour and can indeed shape the social and cultural aspects of the community within the built environment. The socio-cultural aspects of the community as a result of the spatial organization of the built environment is an important concept and can be used in architecture and urban planning for shaping the behaviour of the community, and thereby influence its "social behaviour" and wellbeing for a harmonious, equitable and sustainable environment.



## 5. References:

1. Ademovic, Naida. (2018). SUSTAINABLE DEVELOPMENT AND CONCRETE BRIDGES.
2. Amin, Ash. (2008). Collective Culture and Urban Public Space. City. 12. 5-24. 10.1080/13604810801933495.
3. Ayyoob Sharifi and Akito Murayama. (2013). A critical review of seven selected neighborhood sustainability assessment tools. Environmental Impact Assessment Review Volume 38.
4. Birch, Eugenie. (2010). Public and Private Space in Urban Areas: House, Neighborhood, and City. 10.1007/978-0-387-32933-8\_8.).
5. Brown, B., Perkins, D., & Brown, G. (2003). Place attachment in a revitalizing neighbourhood: individual and block levels of analysis. Journal of Environmental Psychology, 23, 259–271.
6. Carney, K. (2007). Affordable housing: A holistic design approach to the domestic environment; Masters Dissertation, Washington State University; Retrieved from <http://spokane.wsu.edu/academics/design/documents/Theses/KariCarney.pdf> Consumer Affairs, 14, 341–365.
7. Chermayeff S, and Alexander C (1963) Community and Privacy : Toward a New Architecture of Humanism. Garden City, NY: Doubleday Anchor.
8. Dirsuweit, T. (2009). New Urbanism, Public Space and Spatial Justice in Johannesburg : The case of 44 Stanley Ave. Annales de géographie, 665-666(1), 76-93. doi:10.3917/ag.665.0076
9. Erikson, E. H. (1968). Identity: Youth and crisis. New York, NY: Norton.
10. Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137–170). Aldershot: Ashgate.
11. Hernández, B., Carmen Hidalgo, M., Salazar-Laplace, M. E., & Hess, S. (2007). Place Attachment and Place Identity in Natives and Non-Natives. Journal of Environmental Psychology, 27(4), 310–319.
12. Irwin, A., 2001, Sociology and the Environment. A Critical introduction to Society, nature and knowledge, Cambridge, UK, Polity Press.
13. Laughlin, D. L., & Johnson, L. C. (2011, October 12). Defining and exploring public space: Perspectives of young people from Regent Park, Toronto. Retrieved April 30, 2018, from <https://www-tandfonline-com.tudelft.idm.oclc.org/doi/pdf/10.1080/14733285.2011.590703?needAccess=true>
14. Lawrence R (1982) A "living" laboratory for home design. Building Research and Practice. 10:50-58.
15. Lefebvre, H. (1991). The production of space. Malden, MA: Blackwell.
16. Madanipour, A. (2014). Public and Private Spaces of the City. Publisher: Abingdon, Oxon: Taylor and Francis Ann Arbor, Michigan ProQuest.
17. Maslow, A. H. (1954). Motivation and Personality. New York, NY Harper & Row Publishers. - References - Scientific Research Publishing.
18. Montgomery, J. (1998) Making a City: Urbanity, Vitality and Urban Design. Journal of Urban Design, 3: 1, 93-116.
19. Nissen, S. (2008). Urban Transformation from Public and Private Space to Spaces of Hybrid Character. Retrieved April 30, 2018
20. Pretty, G. H., Chipuer, H. M., & Bramston, P. (2003). Sense of place amongst adolescents and adults in two rural Australian towns: the discriminating features of place attachment, sense of community and place dependence in relation to place identity. Journal of Environmental Psychology, 23.
21. Sfinteş, Anda-Ioana. (2014). Boundary-spaces in the architectural anthropology [phD thesis].
22. Skov, M. H. (2016, May 26). Activating Public Spaces (T., Ed.). Retrieved April 30, 2018, from <https://www.youtube.com/watch?v=5yB7xkiR5ts>
23. Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. The social psychology of intergroup relations?, 33, 47.
24. WAUA 2008. "On the strange disappearance of semi-spaces in London". <https://waua.wordpress.com/tag/semi-private-space/>
25. Yimsrual, Supakit. (2013). Architectural Anthropology and the Study of the Built Environment. The International Journal of Critical Cultural Studies. 10. 23-35. 10.18848/2327-0055/CGP/v10i03/43706.

6. Annex:



*Fig 5 (a) Schematic diagram showing the spatial organization of the built area. Legend provided in the next page*

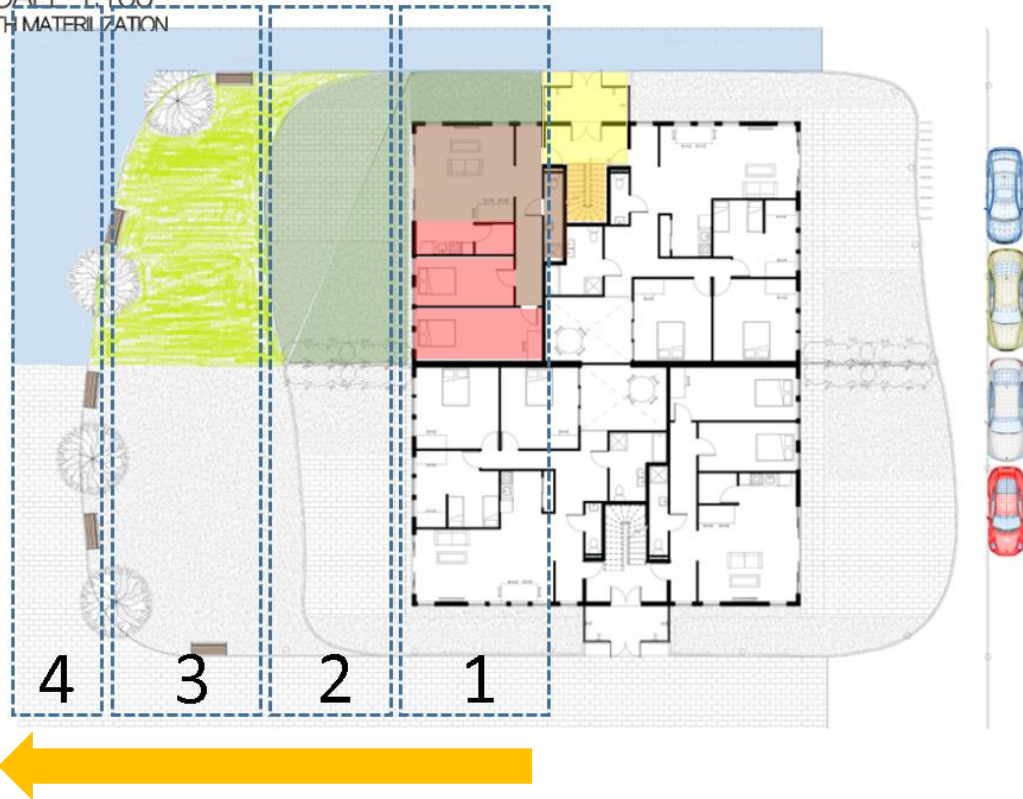
*Fig 5 (b) Physical Amenities present in the built area for Access, Activities, and Image*

Legend 5a:

- |   |  |  |
|---|--|--|
| <span style="color: blue;">■</span> Access Paths    | <span style="color: orange;">■</span> Public / Landmark  | <span style="color: grey;">■</span> Semi-Private Space |
| <span style="color: green;">■</span> Public Spaces  | <span style="color: yellow;">■</span> Semi-Private Space |  |
| <span style="color: purple;">■</span> Hybrid Spaces | <span style="color: black;">■</span> Private Spaces      |  |

## GROUND FLOOR PLAN:

SCALE 1:100  
WITH MATERIALIZATION



*Fig 6: A zoomed in part of the plan showing the hierarchy of the spaces from the innermost intimate to the outermost public space. See legend below.*

Legend:

- |                               |                       |                 |                 |
|-------------------------------|-----------------------|-----------------|-----------------|
| <b>1</b> Intimate and Private | <b>2</b> Semi Private | <b>3</b> Hybrid | <b>4</b> Public |
|-------------------------------|-----------------------|-----------------|-----------------|
- 
- |  |  |   |
|--|--|---|
| <span style="color: red;">■</span> Intimate (Bedroom)      | <span style="color: brown;">■</span> Private (Living)                        | <span style="color: yellow;">■</span> Semi private (common staircase) |
| <span style="color: orange;">■</span> Semi private (Lobby) | <span style="color: green;">■</span> Semi private (Garden for the Apartment) |   |
| <span style="color: lightgreen;">■</span> Hybrid (Park)    | <span style="color: blue;">■</span> Public (Street)                          |   |

(a)



(b)



(c)



*Fig 7: Model (1:100) of site plan section (see dotted red box in fig 5a).*

Legend:

- Parking Space (Diffused Boundary)
- Public Sidewalk (Diffused Boundary)
- Public Access Path (Diffused Boundary)
- Private Garden (Strong Boundary)
- Hybrid Recreational Space (Diffused Boundary)



(a)



(b)



(c)



(d)



*Fig 8: Project visions depicted through renders of site plan. (a) Multifunction recreational space (b) Football field (c) projection of lake from café / restaurant. (d) Vision of the residential area in the site.*