

WOMEN'S FEAR AND SPACE CONFIGURATIONS

51

Carina Listerborn

Chalmers University of Technology, Göteborg, Sweden

51.1

0. Abstract

In this paper the possible relation between women's fear and space configurations is discussed. Bergsjön - a suburb to Göteborg in Sweden will illustrate the problem, and the concepts of virtual community is used. The structural analysis is important in the work with fear- and crime-prevention, to gain a deeper understanding of the problem and to go beyond the very local measures that usually is inserted.

Keywords: women, fear, Bergsjön, virtual community, urbanity

*Carina Listerborn,
PhD Student, 1998-12-15
Dep. Urban Design and Planning
Chalmers University of Technology
S-412 96 Göteborg, Sweden*

Phone: +46 31 772 24 30

Fax: +46 31 772 23 94

E-mail: cali@arch.chalmers.se

This paper raises the question, in what way the spatial properties which causes experience of fear in public space could be described and analysed. This issue will later on be further developed in the doctoral thesis. The main theme of the thesis is how women express and handle their use of public space (especially at night) in the city. What role does the architectural structure of a city play and what constitutes a frightening environment? Using fear as a vehicle to analyse how different groups occupy space is also a way of analysing the city and society more general.

1 Introduction

"It sometimes was with bated breath that I went to work early in the morning to open at the day nursery!.../The fear I sometimes felt, was so strong that my mouth went dry,...but it was due to the fact that there was no kiosk there then, it had shut down since no one dared to work there because the nearby buildings were empty. There were no life and it was ghastly, there were no lights in the windows."(1)

The woman, who has lived 27 years in Bergsjön, describes an experience from her neighbourhood during a period when buildings were left empty. (Today the flats rents advantageous by students - a way to get people to live in Bergsjön.) Her description of fear when going to and from work corresponds well with other researches on experience of fear in public places; there is no people anywhere....

The underlying assumption of this paper is a gender difference in the experience of fear, and that women tend to fear empty and desolated spaces more than men do. The concept of virtual community is discussed and the line of argument is then applied on a specific area, Bergsjön, which is an interesting area in the perspective of (lack of) urbanity. Spatial properties like integration value are put to use and intelligibility and isovist is discussed as possible measurements.

2 Frightening places

How then do we plan areas that become empty and scary? The kinds of places that are most feared include parks, green open spaces, beaches, parking areas/garages, tunnels, subways, back-streets, stairs, isolated bus stops, industrial areas and dark

51.2

empty parts of the city, like shopping areas or neighbourhoods at night. Prejudices against different social and ethnic groups also influence the experience of fear, while being in your own neighbourhood make you feel safer. Many of these categories and descriptions can be applied to Bergsjön.

There are both physical and social aspects to places that can be experienced as frightening. Fear can be caused both by other people's presence and their absence. Different social situations and circumstances influence the experience of spaces. Crowds, disturbances, and noisy groups can be frightening, but more often the presence of people can reduce the fear because of the social control that it introduces. Women tend to fear empty places more than men do. (See Koskela, H. 1995)

Handling fear when using public space is an everyday experience for many people, and citizens have developed different strategies to cope with it. There is a difference between the fear women experience and the actual risk that exist. Surveys have shown that women tend to fear crime more than men do but are less exposed to crime than men (See Tiby, E. 1991). The fear shows though, that women in some ways feel vulnerably and that this should be taken seriously. The gender-difference in the fear of crime also influences women and men's lives somewhat differently. The main source of women's fear is the fear of an additional crime - a sexual attack, like rape, besides a robbery or an attack. The awareness that it can happen anywhere, that it has long-lasting effects and that your prospects of redress are small makes it a very serious crime. It differs from other crimes in that it focuses on gender: a woman is scared because she is a woman, and she is afraid of a man. When they meet in a dark place at night the power relations are obvious, regardless of whether the man is well intentioned or violent. This implies a power relation between gender. Who own the space? Doreen Massey argues that social phenomena and space grow out of social relations. The concept of social relations involves categories such as class and gender, and therefore also powers relations. From this perspective, the spatial is political because the spatial represents social relations 'stretched' out. (Massey, D. 1994: 1ff) This raises an important issue. If we build our social relations into the physical environment, as I believe we do, we need to analyse the shape of our existing social relations and how these are reproduced in the environments we create in order to better understand how physical structures influence our lives.

Many women have developed strategies to handle their fear, and sometimes unconscious they monitor their walking pace, facial expression and posture. Decisions have to be made as to whether to take the shorter route or the safer route. This implies the importance of discussing spatial structures because these decisions are connected to the degree of intelligibility and visibility. Other strategies include taking a taxi home, getting a ride with someone you know, staying over at a friend's home, etc. To forestall crime, women take courses in self-defence. All this involves a lot of planning and worry. (Weisman, L. K. 1992, Valentine, G. 1989) If women tend to become more frightened, fewer women will be seen in public spaces and the fear among female citizen will increase and reproduce existing structures.

In geography, fear of crime is recognised as a significant social problem and is an established field of research. While this may not be so in Sweden or Scandinavia, it is true internationally. Women's growing fear of crime and their tendency to limit their mobility is also known, but less investigated.⁽²⁾ Feeling safe is an important aspect of the quality of social life and also a matter of democracy and justice. Is democracy working if one cannot walk safely on the streets and take part in public events?

51.3

In this study fear is separated from the question of where crime actually happen. Though the categories are related there is a difference in how the problem is tackled. Crime includes a wide field, from burglary to street-violence, and concentrates on an object or a situation. Fear is rather related to how you experience and interpretate the environment. In both cases urban emptiness is an important aspect though.

3 A need for structural analysis

The theory of space syntax concerns the relation between the social dimension and the built environment, which is crucial for this study. The space syntax configuration analysis focus on the city's ability to connect spaces which has been shown to be related to the ability to generate peoples movement. This ought to be a central aspect of fear- and crime-prevention due to the above-mentioned description.

Often crime-prevention measures focus on architectural and social issues on a local level. Partly because that is relatively easy to bring about, partly because the architects don't see the importance of an overall urban-analysis. All though local measures are important, and that environmental improvements should be regarded on different levels, I will stress, in line with Björn Klarqvist and John Miller that; 'you can't get life into a dead square in spite of how many benches or other architectural efforts that you put in it. The only thing that can help is if you consider how well the square is connected to the overall system.' (Klarqvist, B. & Miller, J. 1985; 104, Translation by the author)

*When you walk home alone from the bus stop to your housing area it could be specific places you fear more than other places, but would these places be that 'unsafe' if they were at another position in the city?*³

The surrounding is significant, even though the local design is not negligible. The structural analysis is important to gain understanding of the built environments impact on women's experience of fear, because it is the city as a whole, which creates the places and not the separate places that, creates the city. The space syntax theory is about the relations between the parts in the whole. (Hillier, B. 1988, Markus, L. 1998: 37-46)

In Sweden the dominant planning idea since World War II has been based on function hierarchies, traffic separation and a local community which is segregated. This has created a fundamental structure, which is difficult to improve afterwards. Space syntax analysis has shown that the shape of city-plans is important for the life in the

51.4

city. By comparing the grid-system with the tree-system researchers has shown the different degree of integration values.(Klarqvist, B. 1997) Bill Hillier argues that 'the urban movement economy, arising from the multiplier effect of space, depends on certain conditions'(Hillier, B. 1996:175):

'lowering densities wherever possible, breaking up urban continuity into well-defined and specialised enclaves, reducing spatial scale, separating and restricting different forms of movement, even restricting the ability to stop travellers from moving and taking advantage of the by-product effect - are fundamentally inimical to the natural functioning of the city and its movement economy. It is not density that undermines the sense of well-being and safety in urban spaces, but sparseness, not large spatial scale, but its insensitive reduction, not lack of order but its superficial imposition, not the 'unplanned chaos' of the deformed grid, but its planned fragmentation.' (Hillier, B. 1996:179)

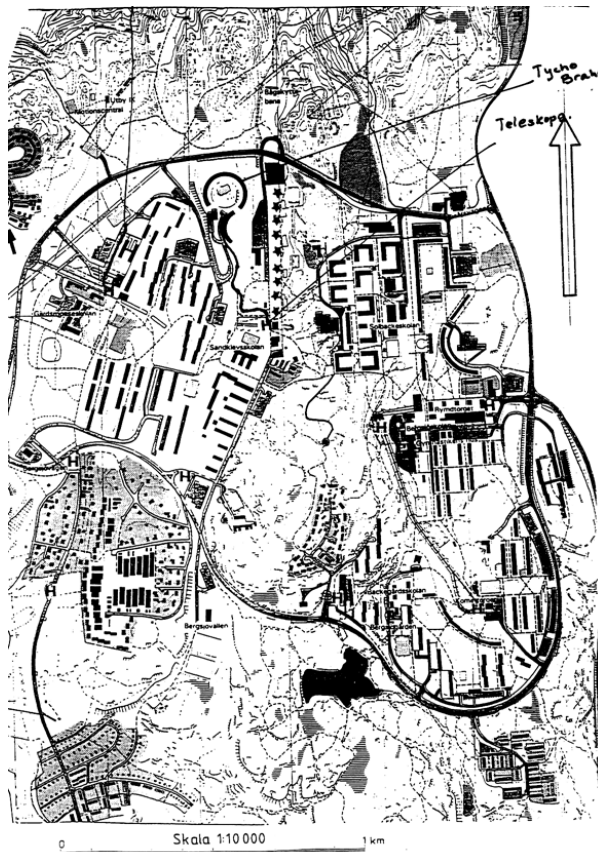
In line with this argument Bill Hillier argues against Oscar Newman's 'defensible space' when discussing spatial distribution of crime, by saying that other people, including strangers, keep you safe.(Hillier, B. 1998) I will come back to this later on.

Bergsjön's city-plan is rather common in the Swedish larger cities suburbs. The sample is chosen due to the areas clear demarcation, its typically suburb plan and reputation.

4.1. Casestudy: Bergsjön

Bergsjön is a segregated area both socially and spatially. Bergsjön is situated 8-km north-east of Göteborg (3). It is in an area beauty of nature and very hilly. These are common characteristics for the suburbs of Göteborg. It was built in the late sixties during the Million Programme in Sweden.(4) Here lives 13 700 people and about 25 % are foreign citizens. Many are unemployed and the area has had a bad reputation in media with a lot of criminality mentioned. When talking to people who lives in the area the beautiful nature is mentioned, the clean air and the good social relations between neighbours. Here, they say, you can be as you want and if you wear the Muslim shawl no one comments it, but they also say that they often must defend Bergsjön when talking to people from other parts of Göteborg. What people living in Bergsjön complain about is the lack of services, noises around the tram-stops and that the pathways through the green areas are unlit and empty after dark (which in Sweden occur early in the afternoon and early in the morning during half of the year).(5) The crime- and social situation in Bergsjön is not the main issue of the paper, though.

Bergsjön (see map, enclosure 1) is divided in an east and west side due to the topology. Between the parts there is a green area. Around the square; Rymdorget in the east part, the service-centre is located. The tram has four stops in the area. The traffic is separated, with at ring road around Bergsjön and just short transports roads in to the parking garages outside the housing-areas. Between the buildings there is no traffic, just pathways and green open spaces.



51.5

The main spatial problem of Bergsjön is that you cannot define its character. Is it rural or urban? This confuses your expectations. When you arrive by car or tram you see houses, but when you walk around in the area it is mostly wooded parks. Once I began walking on a pathway, turned back because I thought I was going right ahead in to woodland. When asking a man he answered - "oh no, it leads to a housing-area." It is not house in park, it is house in the wood! Although this got its charm it is also a problem from a 'fear-point-of-view'. Arriving after dark you do not want to get lost in the wood, you want to get to the person your visiting (or place you live). Swedish people are very familiar with forests and usually not afraid of it, but here it is not nature in that sense - people can be around. As mentioned, many people living here is not Scandinavian and could have a different experience of woodland, some may relate it to a guerrilla war. The problem of defining space is also connected to the problem of interpreting and understanding the space.

figure 1. Map over Bergsjön

4.2. Integration value

The methods chosen to analyse Bergsjön are related to the aspect of virtual community and integration-value, and the aspect of intelligibility, bearing in mind fear is related to the feeling of being left out to a perpetrator in a place where no one can see or hear you. Fear is related to the degree of emptiness and thereby likely to the degree of integration, which depends on the spatial structure. In this aspect the space syntax concept of virtual community is important. Virtual community in a given area is defined by Bill Hillier as 'the pattern of natural co-presence brought about through the influence of spatial design on movement and other related aspects of space use.' (Hillier, B. 1996:187) This 'physical distributions of people in space' can be created through the spatial configuration. 'If space is designed wrongly,

51.6



figure 2. Mean integration Bergsjön



figure 3. Mean Integration Bergsjön

then natural patterns of social co-presence in space are not achieved. In such circumstances, space is at best empty, at worst abused and a source of fear.'(Hillier, B. 1996:188) The co-presence and co-awareness of neighbours and strangers accomplish virtual community.

The first map (see enclosure 2 and 3) shows the global integration with the ring road included. In the second map the ring road is excluded and the lines showed are merely pathways for walking and cycling. Since these includes stairs and steep hills it is mainly walking that is possible for most people. When comparing these two it is obvious that the traffic separation influence the degree of integration. The ring road absorbs the movements and drains the area inside. There are two layers of traffic systems, which do not connect. Some of the lines in the second map is available by car but is mainly walking-paths. Having two systems extends the total network of roads. It divides also, not only, the traffic system, but also even people into those who own a car and those who do not. Here class and gender influence the social and spatial separation. The category-division underlies the structure. Due to fear people also prefer to walk on the ring road, which not have a pavement, instead of crossing the green areas inside Bergsjön which could be highly dangerous.

51.7

The global integration analysis also shows that the integration in the whole area of Bergsjön is rather diluted due to the tree-system. Is it possible then to talk about the urbanity of Bergsjön?

4.3. *The urbanity of Bergsjön*

The Swedish-Danish architect Bo Grönlund has made a proposal that you can measure the degree of urbanity. His idea of urbanity is influenced by Bill Hillier's concept of virtual community, but besides co-presence of a mixture local people and strangers, he also adds the idea that human works and creation should be taken into account. Urbanity, he argues, is about time and space, therefore you can measure the degree of urbanity through counting how many people that pass through a distance of 100 m per minute. If there is less than two people beside you within 100 m it is the lower limit of urbanity and the lower level of human creativity are 8-10 work/100 m distance of street.(Grönlund, B. 1998)

Visiting Bergsjön a Monday at noon I used this method on two trails from tram-stops to housing-areas (see map, enclosure 1). The first trail was at Galileis Gata and the housing-area close to the tram-stop. Here a food-store, two hairdressers, a kiosk and a video-store are located. The housing area consists of four-storied buildings. This part of Bergsjön is rather worn down. When walking around in the area I counted to a mean of 5-6 people in sight per 100 m. Whether the people were strangers or living in the area is difficult for me to say, but since I several times in Bergsjön have been asked if they could help me to find my way, I presume most of them are living there and recognise a stranger just by the look. Counting human work and creations are more difficult. The buildings has long facades and not with a big variation. With a good will, counting Christmas tree and shops, there was maybe 5 works per 100 m. This is important, because people live here and they must go to their home or the tram-stop, but there is nothing to notice or to do on their way which would make them stop for a minute.

51.8

The second trail, from the tram-stop at Teleskopgatan to the housing area at Tycho Brahegatan, is a bit different. Here you have to walk through a park area, long stairs and then further through a green area to the six-storied housing complex. The only service is a kiosk at the tram-stop. Here I counted to a mean of two people in sight during the walk. The human work is less. Both of these examples can be said to contain a minimum of urbanity due to Bo Grönlund's suggestion. When looking at the integration maps both these trails have a very low integration-value.

4.4. Other possible analysis; intelligibility and the isovist

The measure of intelligibility is interesting to analyse in relation to the experience of fear, since fear often is connected with not being able to see what will happen or where you are able to go from where you are standing, e.g. if you have an alternative route if something/somebody threatening appear. Intelligibility is important to understand the space configuration and I suggest that the degree of fear is related to the degree of intelligibility and that this could be a useful method to find out how fear is related to the spatial structure.

The integration value illustrates the depth from one space to all the others. Connectivity measures the numbers of lines that intersect with a line; the property of a line which can be seen from the line - a local property. The correlation between the local connections and the global connections gives the degree of intelligibility.

An intelligible system is one in which well-connected spaces also tend to be well-integrated spaces. An unintelligible system is one where well connected spaces are not well integrated, so what we can see of their connections misleads us about the status of that space in the system as a whole. (Hillier, B. 1996:129)

The isovist is also related to intelligibility - how to understand the environment, due to what you is able to see from one space. It is important that you can calculate what is behind the corner or the bushes in the case of fear. The isovist is important to gain knowledge of the immediate environment through visibility.

There is a problem using the isovist since the ends of the isovists are not clear. A lot of green areas, which changes form during the seasons, make the barriers unclear. Visiting the area you realise that it is not just the buildings, which limits your visibility. Isovist is also connected to the lightening. After dark the green areas absorb a lot of the lightening and makes the visibility weak; the area becomes dusky and shady. Other methodological problem is the topology and on what level the isovist should be regarded. In a study of fear, the very small corners or angles induces fear. Even so, I think the isovist is very important to analyse in relation to fear and space configuration.

5 Planned segregation

Bergsjön, like many other suburbs, is planned segregation. There will be a problem to change this. In the Planning-program for the area the City Planning Office argues that the resources and values of Bergsjön is the nature and the people and not its urbanity, therefore they will concentrate on making it an ecological area. (Bergsjön - Områdesbeskrivning.1992) Even if the service got better it is not possible to hope for more people to come from Göteborg to Bergsjön to mingle. It is a greater possi-

bility that people would come here to ski and see the nature. So the idea with an 'ecological area' could be constructive.

Although, I think it is important to discuss what causes fear. It is a problem if we plan segregation and then realise negative by-products, which we not intended or wished. The City Planning Office suggests more light, more benches, gardens and reducing the asphalt areas. They also want to have activities in the ground floors of the buildings and to do something about the parking garages where there is a lot of criminality. This maybe helps, but there is also a possibility to look at the spatial configuration for a more long-term achievement, even though Bergsjön never will gain urbanity.

51.9

In 'Against enclosure' Bill Hillier analysis the principles of enclosure, repetition and hierarchy, which leads to fragmentation of the city. He argues that enclosure is not the answer to the vulnerability to crime, that people experience today, instead he thinks that is the urban problem.

I will argue that to rehumanize our urban environment we must restrict the use of the enclosure concept to those places where it is genuinely applicable, and for run-of-the-mill public space re-establish the idea of open, outward facing layouts, with intelligibility and integration given priority over exclusion and group territory. (Hillier, B. 1988:64)

Rehumanize housing could be done through making sure that all spaces, however small or narrow, have building entrances opening directly onto them. Avoiding clustering too many entrances on too few spaces. Spaces should have links of visibility to the larger scale structure and the orientation of the building facades should be such that they clarify the line and space structure; 'lines of sight striking buildings at open angles will suggest further movement possibilities; and marking important moments in the spatial structure with key facades will aid intelligibility and memorability.'(Hillier, B. 1988:87) Regarding crime-prevention he says:

We ././ find that crime is higher where access is through spaces which are unrelated to building entrances./.../In general, safety seems to lie in linearity (including occasional short linear cul de sacs attached to streets, but not cul de sac complexes) and in the continuity of building entrances through all spaces./.../ coupled to the minimisation of rear and side access. (Hillier, B. 1998)

The housing areas in Bergsjön are like a 'cul de sac' and rather closed, which increase the lack of intelligibility and visibility. The economic cost will of course be big in such changes space syntax analysis anticipates, but today a lot of money is put in to change the architectural expression, so maybe it would not be impossible to do changes that would last longer and go deeper into the problem to the same cost. A student-project on Bergsjön came up with suggestions to open up the different parts of the area to increase the connectivity. Even if Bergsjön is segregated there could be internal changes which leads to a better connection between the parts and make it possible for people to walk to the food-stores. Students also came up with the idea of making the green areas more city-park like, e.g. more open and pruned. This could help strangers to define the areas character and make it lighter and more visibly.

6 Conclusions: Fear and Space Configurations

There is a trend for people to feel increasingly insecure and to regard violence and other forms of crime in public space as a serious problem. I believe that our strategies in dealing with this problem should not be based on the types of security systems, which are common, for example in the USA, including gated neighbourhoods, supervision cameras, locks and guards. Such systems endorse violence, crime and people's insecurity. Moreover only those who can afford security arrangements can take an active part in public events. The fact that the distribution of economic power is class and gender-related means that the same will be true of security. Instead I would argue for safety features that include differentiated activities in an area, social control and a living city. Urban residents should not be locked in; instead they should be enticed into participating in an active city life. To attain that and to gain a deeper understanding of the problem, structural analysis is needed, as well as studies of everyday strategies and place-analysis.

When analysing the relation between fear and space configurations three concepts seems useful, (even though their application not yet is all clear for me). Fear is increasing with:

- 1 -urban emptiness. This is related to the concept of virtual community and urbanity and is measured by the mean integration value.
- 2 -the lack of intelligibility. If you can not understand the environment and are able to see alternative routs you feel less safe.
- 3 -the lack of visibility. If your visual field is small, especially at night, your fear may increase.

7 Notes

- 1 Interview 981204 with a Muslim woman in Bergsjön. Translation by the author.
- 2 In Sweden, surveys by the Crime Prevention Council have shown that women tend to be six times more worried about crime than men -P.-O. Wikström. (1990), 104
- 3 Göteborg is the second largest city in Sweden.
- 4 When one million flats were built during ten years to counteract the desperate lack of housing.
- 5 Interviews 981204 with two Muslim women in Bergsjön.

8 References

- Bergsjön - Områdesprogram, (1992) Stadsdelsförvaltningen Bergsjön, Stadsbyggnadskontoret Göteborg.
- Hillier, Bill, (1988) 'Against enclosure.' In N Teymur, T Markus (eds): *Rehumanizing Housing*, London
- Hillier, Bill (1996) *Space is the Machine*, Cambridge, Cambridge University Press
- Klarqvist, Björn & Miller, John (1985) 'Stadsförnyelse utan rumslig teori' in *Arkitektur 8/85*
- Klarqvist, Björn (1997) 'Spatial Properties of Urban Barriers, in *Space Syntax*', First International Symposium, article 28, London
- Klarqvist, Björn 'Att hela staden' in *Nordisk Arkitekturforskning*
- Koskela, Hille (1995) 'Stadsmiljön som rädsans och kontrollens rum' *Kvinnor och miljöer: rapport från det 9:e Nordiska kvinnojuristmötet*. University of Helsinki
- Markus, Lars (1998) 'Stad - kärt namn med många barn. Ett försök att urskilja det urbana som en spatial kategori.' In *Nordisk Arkitekturforskning 3/98*, 37-46
- Massey, Doreen (1994) *Space, place and gender*. Oxford, Polity Press
- Tiby Eva (1991) 'Kvinna och rädd?' *Rädsan för brott*, Gunilla Wiklund (ed), BRÅ, Stockholm, 1991:2
- Valentine, Gill (1989) 'The geography of womens fear.' *Area 21*:4
- Weisman, Leslie Kanés, (1992) *Discrimination by design - a feminist critique of the man-made environment*, Urbana & Chicago, University of Illinois Press
- Wikström, P-O, (1990) *Brott och åtgärder mot brott i stadsmiljö*, BRÅ-rapport 1990:5, Stockholm

Other references

- Grönlund, Bo 'Om urbanitet och centralitet' Web-site. 981206, <http://users.cybercity.dk/~bdi1720/>
- Hillier, Bill (1998) 'The common language of space' Web-site.981218, <http://www.bartlett.ucl.ac.uk/spacesyntax/>
- Interviews 981204 with two Muslim women in Bergsjön.