

## ACCESSIBILITY IN PUBLIC SPACE – WAYFINDING IN HOSPITALS

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The project deals with developing new knowledge about which factors are important in finding your way in large building complexes. I have chosen hospitals as cases, but it will be possible to a wide extent to transfer the developed knowledge to other types of building complexes.

Being able to find one's way or not find one's way causes a range of reactions in the individual in question: for instance insecurity, anxiety, loss of time, frustration, fear of getting lost or not getting there. In the hospital complex, it is not only the affected individual who is involved but also the staff that repeatedly during a workday is interrupted in their real work in order to direct lost patients and relatives the correct way. In a time of scarce personnel resources, this is considered a big problem.

The project places itself in a social context where the largest, major comprehensive investment in new hospital building in Denmark since the 1950es-60es is planned. As it is problematised in the book from 2007 "Sansernes hospital"[1] (the hospital of senses), the question is whether there is sufficient knowledge to accomplish the task. Hopefully, this and a number of future PhD projects with hospital architecture as subject can contribute to this.

The theoretical part of the project takes its starting point in the concept of wayfinding as it is formulated by Kevin Lynch in the USA of the 1960es and subsequent American research from the 1980es to the 1990es. The concept is furthermore illustrated through theories on the architecture of the senses or architectural sensing that is not formulated based on a clear theoretical form but rather appear essayistic: Marc Augé, Poul Connerton and Christian Norberg-Schultz.

## SUMMARY

The project stems from wondering how difficult it often is to find your way in hospitals: As a practicing architect, I have worked with planning of hospitals and know from this that a lot of effort is put into planning the hospital projects with the simplest possible internal logistic in order to ensure flow and good orientation.

Judging by how much the staff is asked for directions at these very hospitals and the worry about this inefficient use of scarce personnel resources, this effort is not succeeding.

The problems of finding one's way are documented in a number of studies: one study[2] for instance shows that at an American hospital annually uses 4,500 staff hours on guiding patients and relatives that have lost their bearings in the hospital complex. In salary hours, this is in excess of 1.3 million DKK a year. At Roskilde Sygehus it has been proved[3] in connection with a stress and efficiency analysis in a clinical chemical department that the staff was "frequently disturbed by patients who could not find their way out of the department". It is not in all hospitals that wayfinding problems occur just like the extent of the problem is varying where they are found.

In the places where it is most serious, the consequences are both socio-economic and human. Among human consequences, I can emphasise increased stress in patients, relatives and staff. Stress influences recovery as well as cognitive abilities negatively. Ultimately, the difficulties in finding the correct way may in a case where a critically ill patient cannot find his way to the emergency department mean the difference between life and death. This way, the lack of accessibility to the hospitals implies a number of unwanted consequences.

What goes wrong? What is it about the condition of our hospitals that makes them so difficult to find one's way in and gives them an aura of inaccessibility? Are the problems general or specific to the individual hospital?

On page 113 in a report from June 2009 "Helende Arkitektur"[4] (healing architecture), it appears under the heading *Bevægelse (movement)* "Den afgørende faktor for, om det er let eller svært at finde rundt i en ukendt bygning som f.eks. et hospital er bygningens planløsning" (the decisive factor as to whether it is easy or hard to find one's way in an unfamiliar building such as a hospital is the plan arrangement). This assumption is consistent with the terms based on which architectural practice primarily works. Furthermore, in practice, signs are used as a design means to guide the users. The question in this connection is whether signs and plan

arrangement are really a decisive factor in being able to find one's way in the primary walking areas of the complexes. This is illustrated through case studies from three Danish hospitals and the above-mentioned, previous research within the framework of the Environmental Psychology.

## RESULT

On this background, new knowledge has been developed about which factors are important to wayfinding in hospital complexes. The internal relations and possible hierarchy of the parameters have furthermore been illustrated.

The results point to a complex interaction between a number of different and other parameters than plan arrangement and signs: the plan arrangement of the building is apparently not as important as assumed in practice and previous research in relation to whether the users get lost. It is far more important that the choice points of the plan arrangement are as few as possible and can be taken in through the entire wayfinding movement; that they are visible from a long distance and are marked for instance by landmarks in a distinctive, three-dimensional shape. Marking of choice points by signs is insufficient for making the user feel safe as he will during his stay in hospital often be cognitively "weakened" and find it hard to read signs. A large number of signs and massive signposting seem to increase the users' insecurity and stress and thereby accidentally work directly contrary to the intention. Furthermore, it indicates that a clear view out from the primary walking areas that gives the possibility of orientating oneself relative to entrance and external landmarks is extremely important if the users are to avoid getting lost. The positive effect of a clear view can be cancelled if there are no distinctive landmarks in the view after which you can orient yourself; just like long indifferentiated walking areas have a disorienting effect. Finally, a connection and interplay is exposed between the hospital as a place (the way it is sensed by the user), the user's security and his ability to find his way. The accessibility of the hospital depends on its aura as a public place. If the user does not feel safe and taken care of in the spatialities he meets in the hospital complex, it will be difficult for him to orient himself. And vice versa, if the hospital complex does not give the possibility of finding one's way for instance by means of view, overview and clear landmarks at choice points, the user will be insecure and have a tendency to get lost.

The result seeks an attitude to what kind of places we are planning with the five new super hospitals in Denmark. Are they hospital cities or university cities? Can they be both at the same time and is that in fact making them more efficient? How are the users' needs of security and



care met in the architecture in order for the hospital city to become an accessible, public place?

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1 "Sansernes Hospital", Kim Dirckink-Holmfeld og Lars Heslet, Arkitektens Forlag, 2007

2 McCarthy, M., (2004), *Healthy Design*, The Lancet vol 364

3 LEAN and Humanfactors, Force Technology, 2006

4 *Helende Arkitektur*, A K Frandsen, C Ryhl, M B Folmer, L B Fich, M Mullins m.fl., Institut for Arkitektur og Design, Skriftserie nr 29, 2009.