Poetic Stairs

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1. Introduction

In the modern society of today many people are leading sedentary lifestyles. A sedentary lifestyle means spending most of the day having the body being physically still. One example of this style of living is the following: sitting in the drivers seat of the car when traveling to work in the morning. Using the elevator to get from the garage where the car is parked to the office space on the third floor. Most of the day is being spent sitting in an office chair in front of a computer or in a chair round a conference table until it is time to take the elevator down a few floors to the garage and drive the car back home again. This is a regular day for many people and this can become quite problematic for some. There are great consequences of this kind of inactivity with regard to personal health. Our bodies need daily movement in order to function in an optimal way and the lack thereof can increase the risk of diseases and unhealthy conditions such as obesity, cardio vascular disease, metabolic dysfunction, cancer, an increase in the prevalence of mental disorders as well as psycho-somatic illnesses (van Nieuw-Amerongen et al., 2011; Hintenberger et al., 2013).

Instead of focusing on increasing the level of physical activity a more appropriate approach could be to reduce the sedentary behavior. Physical activity requires more engagement where time, money, equipment and such could be a constraint making it difficult for many people to partake. For reduction of a sedentary behavior one can engage in lots of smaller interventions through which one can increase daily energy expenditure. Even small bursts of moderate daily exercise can create an improvement in an overall health and an increased quality of life (Tremblay et al., 2010).

Even slight changes in the daily whereabouts can be helpful for leading healthier and happier lives. One place where clear alternatives are provided are staircases. Where there is an elevator or escalator there is always a set of stairs as well. Climbing stairs have been proven to have many positive health effects. According to studies the low-cost, inconspicuous and highly accessible form of exercise which a staircase provides is associated with reduced mortality in populations. Short bursts of vigorous exercise spread out and accumulated throughout the day has proven to be greatly beneficial for important physiological and metabolic adaptations. So, choosing the stairs instead of the elevator could possibly make a big difference for us and can be an efficient way for us to incorporate health-promoting activities in our everyday lives (Boreham et al., 2000; Macfarlane et al., 2006).
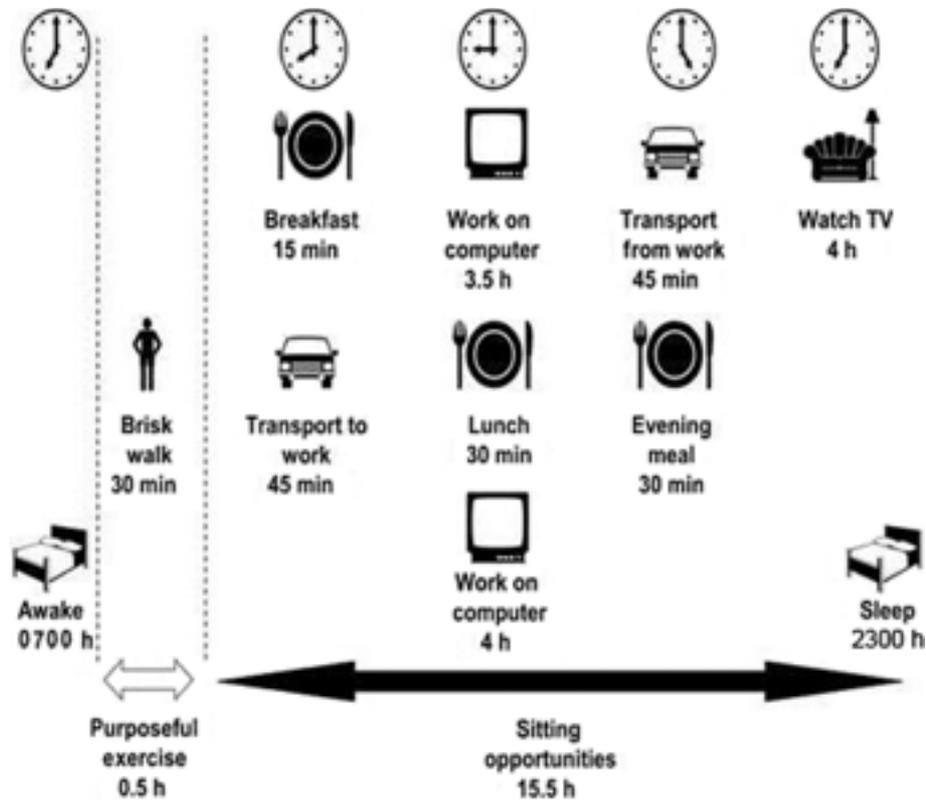
Figure 1. Retrieved From "Physiological and health implications of a sedentary lifestyle" by Tremblay et al, 2010, *Applied Physiology, Nutrition & Metabolism*, 35(6), p.727.

Diagram of a typical day for many people. Even if a period of exercise every day is beneficial it is still harmful for the body to be still for long periods at a time.

Due to an increase in population the hospital of Helsingborg has become outgrown. It can no longer serve the area it is supposed to in a satisfactory way as well as it has become quite outdated over the years. The hospital needs to undergo major changes in order to meet the requirements of a modern hospital in one of Sweden's larger cities today. Improvements to the existing building have begun and will continue over some years. An additional building which will be attached to the existing main hospital building will stand ready in 2019. This new addition will be housing the psychiatric

facilities, addiction center and a restaurant, among other health facilities. The renovations of the existing and additional buildings will be created upon the beliefs of evidence- based design and the salutogenetic perspective where the healthy and positive aspects of the human body is in focus. Human activity is being promoted as a vital part of getting healthier within the hospital environment (Hintenberger et al., 2013).

In this thesis I wish to explore the possibilities of creating an interactive installation in the staircase of the new building in the Helsingborg hospital. Through the use of interaction design create an incentive for patients, visitors and staff to make a healthier choice by climbing stairs instead of using the elevator.

2. Background

2.1 Helsingborg hospital

Helsingborg's hospital was built in 1975 and is one of the bigger hospitals in the region of Skåne. Due to an increase in population in the area the hospital needs to accommodate a larger amount of people than it did at the time it was built. The existing hospital buildings need to undergo a massive renovation to become more modern and to keep up with technology standards of today. Their goal is to be able to provide a better and more human focused care for patients and a healthier work environment for the staff as well as to create a hospital that is well equipped to meet the yet unknown challenges of the future (Helsingborgslasarett, 2016, 19 march). The new building which is planned to be ready by 2019 will be housing all the psychiatric facilities, addiction treatment care and a restaurant, along with other facilities. These new buildings and renovations will be built upon the beliefs of evidence- based design and the salutogenetic view of the human body and mind. Over the last century there has been a big change in types of diseases and conditions that the health care has to take into consideration. From treating mostly infectious diseases we now see a rapid increase in lifestyle diseases and psychosomatic diseases.

2.2 Evidence-based design

Evidence-based design is a popular and much used approach for the design of health care facilities. Using evidence- based design means letting scientific data have a strong influence on the design process and outcome (van Hoof et al., 2015). Examples of this is the importance of sunlight entering the space for the purpose of providing natural light within the building, bringing nature closer to people by providing indoor courtyards and large glass walls and/or windows and creating good acoustics for noise reduction. These are all examples of ways to build for a healthier environment where the wellbeing of staff and patients and their families are in focus. This helps with the healing process, stress reduction and safety and are all outcomes of scientifically collected data (Phiri & Chen, 2013).

2.3 The salutogenetic perspective

Medical sociologist and anthropologist Aaron Antonovsky is the originator of the salutogenetic model of health with the Sense of Coherence (SOC) at the core (Benz et al., 2014). A salutogenetic perspective means, in contrary to the pathogenetic perspective where focus lies upon risk factors for disease, instead seeing the strengths and determinants for health. To focus on the well being of a person. To further understand why some people stay healthy when in stressful environments while others become ill he introduced the sense of coherence scale, being a tool that can explain these factors. Antonovsky means that there are three important factors and elements of the SOC being; comprehensibility, manageability and meaningfulness. Comprehensibility (cognitive) refers to the understanding of the world and what happens around you. Manageability (behavioral) refers to the sense of ability to manage situations and thoughts. Meaningfulness (motivation) refers to the ability to find meaning in different situations in life. The strength of a persons SOC is shaped by life events, both positive and negative, along with internal and external recourses for example personality and social support in a persons community. Studies have shown that these are important factors determining how well an individual can cope in stressful situations (Eriksson et al., 2005).

2.4 Canonical examples:

2.4.1 Piano staircase.

At a subway station in the heart of Stockholm a social experiment was installed. The creators behind this interactive staircase was Volkswagen and the experiment went on for quite some time. Using persuasive technology their intent was to change the attitude of the commuters in using the stairs in favor of the adjacent escalator. They wished to see if joy could change peoples behavior. (Peeters et al., n.d; Pianotrappan, 2009). Sensors were placed on the steps and then covered with some material making it look like a real piano. When stepping on the stairs a sound was created mimicking that of the different piano keys. Many people felt intrigued in trying out the stairs and there was a big increase in stair users versus escalator users when the experiment was in place.

https://www.youtube.com/watch?v=2lXh2n0aPyw

 Picture. 1 Piano stairs. (https://www.youtube.com/watch?v=2lXh2n0aPyw)

Picture. 2 Piano stairs

2.4.2 Talking elevator.

This is an experiment made by the National Geographic's to see if shame can change peoples attitude toward using the stairs instead of taking the elevator. Sensors and cameras were placed inside the elevator car. When someone enters the elevator and pushes the button to go only a few flights the elevator will talk to you instructing you to get out of the elevator and use the stairs instead. At first the message was quite polite and people took no real notice to the message. When the message was changed to a more rude and direct message more people exited the elevator and followed the instructions to use the stairs instead. The more crude message given, the more shaming will be created and the better the person will perform, climbing the stairs in this case (National Geographic n.d).

Picture. 3 Talking Elevator (http://channel.nationalgeographic.com/crowd-control/videos/elevator-of-shame/)

2.5.3 Stair-rise banners and A1 posters

This experiment was carried out in a train station in England. Previous studies had shown that stair-rise banners was twice as effective in encouraging people to climb stairs in shopping malls than regular banners were. The banners on the stair-risers were much more visible to the people passing by and were therefore much more successful in conveying the message. When stair-rise banners were

placed in this specific train station with the message "stair climbing burns more calories than jogging" and "take the stairs" the same kind of effect was anticipated. The attempt was to encourage stair climbing but no change in behavior was seen. The sought after effect was just not there. They then added a conventional A1 poster conveying the same message as was on the stair-risers and suddenly there was a slight increase in stair climbing. The overall effects, when both the traditional poster and the stair-rise banner were in place, were significantly reduced when there were high volumes of pedestrian traffic. Earlier successful tests had been carried out in places where lots of people are moving around, like shopping malls, but never in a place like a train station. The difference was that in a train station lots of people walk in the same direction at the exact same time, blocking the visibility of the stair risers. Few people could see the message (Olander et al., 2008).

2.5 Summary

All of the three examples above had the intention of changing peoples behavior, to make them move in a vertical manner by using their own bodies instead of mechanical devices such as elevators and escalators. The Piano staircase project and the talking elevator project were both successful in persuading people to change their behavior, at least for a short period of time. There has not been many studies on the long term effect of persuasive technology and changes in human behavior (Peeters et al., n.d). The third study using stair-rise massages was the only one out of these three that actually failed in making people change their behavior.

2.6 Motivation

According to a behavior model created by social scientist BJ Fogg there are three elements that need to be in place at the same time for a successful long term behavior change to be possible. BJ Fogg focuses his work on facilitating behavior changes regarding to health in positive ways for improving peoples lives. The three elements that need to coincide are motivation, ability and a well-timed trigger. When a desired behavior is not being reached one of these elements are probably missing.

Motivation: can be split up into 3 sub categories; sensation, anticipation and belonging. Each of these have two sides: pleasure/pain, hope/fear, acceptance/rejection. Sufficient motivation for performing the desired task is needed. Ability: must be able to perform the task. There are two ways of doing this where one is through training people to have more skills. The better way is to make the behavior easier to perform. There are 6 factors that affect ability: time, money, physical effort, brain cycles, social deviances and non-routine. Basically, behavior change will occur when the desired behavior is easy to do (Fogg., 2009). Trigger: there must be a trigger of some sort to "start the behavior" or to tell you to "do it now". Depending on the circumstances this can be carried out in many ways. It can be as simple as a text message or a phone call telling you to engage in the task. Technology can be a very useful tool for triggering a behavior, but can, of course, be done without. An existing behavior can actually be used as a trigger instead of technology as the cue for action. BJ Fogg calls small behavior changes tiny habits and in these tiny habits he talks about the "after" being the desired behavior and the trigger being the existing behavior. For example; After i start the dishwasher i will take my vitamins. Or, after i wash my face in the morning i will put sunscreen on it. These tiny habits have been proven to be successful in slowly moving towards a desired behavior (Fogg., Tiny surprises for happiness and health 2014).

In the behavior model you can see how motivation, ability and trigger work together. The curved line represents the trade-off relationship between ability and motivation (Fogg., What causes behavior change? n.d).
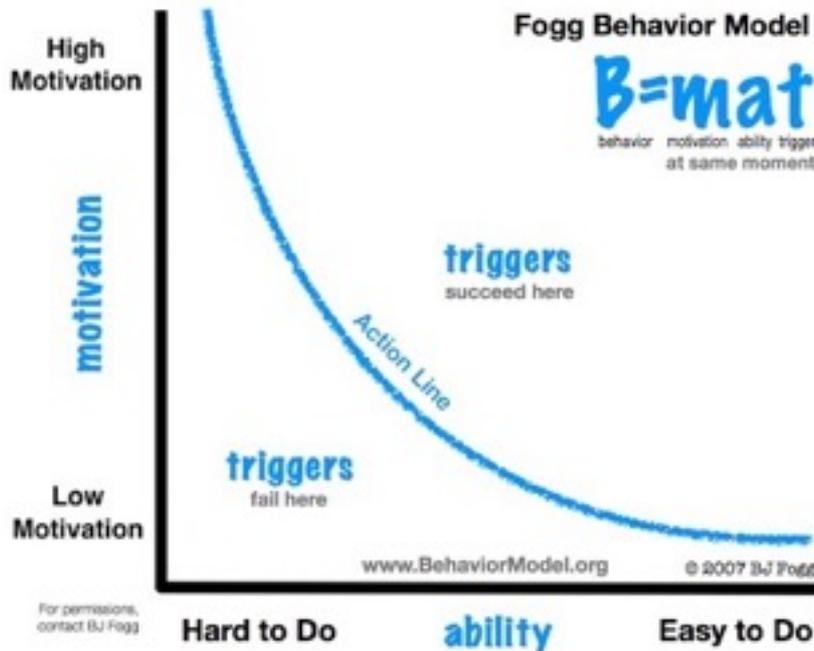
Fig.2 Retrieved from Behavior Model, Fogg, B.J.

The three canonical examples following Foggs behavior model:

The Piano staircase- Motivation: High. It is fun, engaging, social and will provide instant feedback for the users. Ability: Easy to engage in and requires nothing more than walking a set of stairs. Triggers: Seeing other people using the stairs, hearing the sound coming from the piano stairs as well as the inviting look of it.

The talking elevator- Motivation: High. Shame and embarrassment makes people take action. Ability: Easy to do. Requires nothing more than exiting the elevator and walking the stairs. Triggers: Being prompted to take action, message is directed to you.

Stair-riser banners- Motivation: Low. Since people could not detect the message nothing was different to them. Ability- Easy to do. Triggers: Low. The message was not visible or clear to the people they wished to engage.

3. Aim and Research Question

The aim of this thesis is to explore ways to change a behavior. It is discussed in the examples above how a behavior, in this case choosing the staircase in favor of the elevator or escalator, can be made healthier with the help of persuasive design (The piano stair example). A study was made where the piano staircase was taken as the example of change in behavior short term and they wished to explore if behavior could change for the long term by triggering intrinsic motivation. Intrinsic motivation means motivation to achieve a behavior for its inherent satisfaction relating to one's personal sets of beliefs or attitudes in the world and not for external consequences or satisfaction. Intrinsic motivation seems to increase the chances of the behavior being performed for a longer period of time (Peeters et al., n.d). I wish to see if this is possible in the staircase of the building in Helsingborg Hospital as well, but in a different manner.

Q 1. How can I, with the use of interaction design and with the salutogenetic concept in mind, create an interactive installation in the staircase to promote a healthy lifestyle choice.

3.1 Limitations and focus

My focus lies on creating an installation with the salutogenetic concept in mind as well as intrinsic motivation for hopefully a greater success in changing a behavior for the better in terms of health. Focus also lies in the holistic view of the human body where both body and mind are important factors for health improvement. Since the staircase is located in what will be the new psychiatric facility i have been directing my further research towards needs of this specific type of patient and what issues might be of importance. Privacy is an issue that need to be taken seriously. There are also some guidelines given to me by the hospital concerning what will and will not be possible to create in a hospital setting. For example; the installation needs to be easy to clean and it must be able to withstand abuse and sabotage. It may not trigger psychotic patients. Focus lies on the people that will be using the space and their well being. I want the installation to be self explanatory and easy to interact with as well as being playful and make people feel good without any pressure to

perform. No data from the interaction will be saved and no social media will be attached. The installation will be playful but will not be dependent upon a mobile device for its purpose.

4. Methods

There are many design methods and approaches for retrieving the information needed for continuing the design process. Below i will describe a few of them

4.1 Double diamond model

This model is divided into four phases; discover, define, develop and deliver and shows how the design process progresses from the initial problem to a specified solution at the end. The first phase is the discover phase which covers the start of the project including inspiration seeking, insight gathering, research and opinion making. Next comes the define phase in which sense is made of all the possibilities arisen/created from the different forms of research, narrowing things down and creating insight. The develop phase is where iteration starts taking place and solutions are being tested and tried out. In the final part of this model there is the deliver phase in which a specific solution is presented. Final prototypes might be created and delivered.
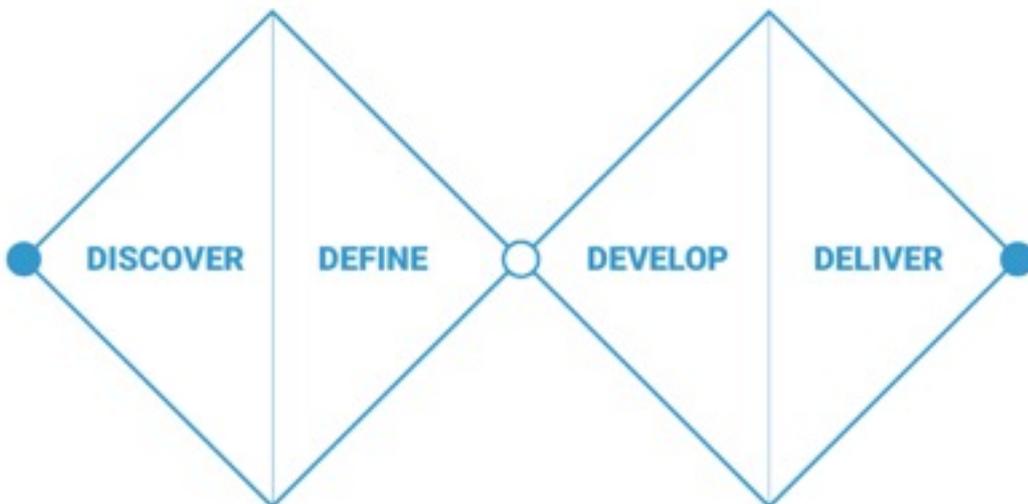

Fig. 3 Double Diamond Model. Retrieved from social digital.

4.2 Human-centered design

By involving the users and trying to see the world from their point of view there is a bigger chance of the result being appropriate and well appreciated. Human-centered design is inspired largely by behaviors and not demographics and it relies upon dynamic conversations rather than formal interviews. Multiple perspectives are taken into account and the design process is seen as experimental and collaborative (Ideo., 2015). Human values are seen as primary and needs to be the guide in the world that people collectively create (Zachary et al., 2016).

Human centered design can be useful in various areas: products, spaces, services and systems. In a physical space for example, human- centered design can make the emotional parts of a space as important as the functional parts. Physical environments can have a great impact on people in how they behave and it can influence how they feel. By rethinking the design of hospitals, libraries, classrooms among others it is possible to create better experiences and interactions leading to better outcomes for the people using that particular space (Ideo., 2015).

There are three phases that human-centered design is built upon; inspiration, iteration and implementation. In the inspiration phase you need to figure out how to better understand the people that are involved and for whom you are designing. In order to reach a deep understanding of the actual needs and motivations of people a good starting point is to gather information by observations and interviews along with other ethnographic methods. During the ideation phase sense is being made of all the information that has been gathered. Ideas will be generated, design opportunities will be identified and the solutions will be tested and refined. The implementation phase is when things are being finalized and applied to area intended (Ideo., 2015). Human-centered design has emerged from various design and non-design fields and is said to fundamentally be an affirmation of human dignity and is looking into what can be done for supporting and strengthening people in varied social, economic, political and cultural circumstances. Human-centered design can offer a well grounded way of involving people and designers to collaborate and engage in the creation of effective and desirable designs (Zachary et al., 2016).

4.3 Provotyping (provocative prototyping)

There are many variations of prototypes and many definitions and areas of use. There are also various expectations of what a prototype actually is. A prototype is often built in order to represent different states of a design in progress and to examine the options at hand. It can be created in different media and be created by different tools. A prototype can range from being a paper sketch to a model in various levels of refinement. One often talks about them in terms of how they look, how they behave and how they will be implemented (Buchenau, Suri, 2000). High- or low fidelity is also something that is often referred to when speaking about prototypes. One important factor though is how it is used by the designer being an excellent means in order to explore and demonstrate a future artifact as well as collecting useful feedback for future development.

Prototypes are often useful for assessments in various phases of the design process. Each time it re-enters it takes on a different role in relation to the space and time being and becomes part of an iterative process. A prototype can be of valuable guidance and can be helpful in discovering weaknesses and limitations during the development and will help in obtaining concrete input instead of pure speculations (Valentine., 2013).

One category of prototypes is called provotypes. The aim of this approach is to create a prototype that is provocative in some sense and wishes to engage and inspire reflections. The provotype aims to challenge peoples thoughts and notions and to expose and embody the tensions or issues that might be connected to the area of interest within the project (Boer & Donovan, 2012). Provotypes provoke discussions with users which can be helpful in articulating concerns that otherwise are hard to put into words (Prototypes Methods n.d).

4.4 Ethnography (Field studies)

It is found in most social sciences today and proven as a valuable tool. Ethnography has its roots in anthropology and was used in understanding and trying to make sense of realities of people living in small scale societies. Designers have at times looked to ethnography to find ways of providing a perspective on relations between humans and the artifacts they use and design. Some say it is just a term for any type of qualitative research whereas others say it is less about the method and more about the way in which we view human activities. In the beginning of 1980's designers started to see ethnography as a resource for design. Designers realized that with the rise of technology it was

no longer sufficient to solely rely on their own experiences as a guide for user experiences and requirements. Developers as well as designers needed to be better informed about how people live their lives and gain understanding of their everyday realities. What people say and what people actually do can vary a great deal so having a first hand view on reality was far better that relying on surveys, focus groups and telephone interviews which had previously been a standard procedure. Ethnography is of great value in the design field and the designers need to immerse themselves in the society/person or activity they wish to design for. Ethnography is not limited to address small scale societies anymore, but is instead applied to study specific settings within large industrialized societies, for example workplaces, schools, specific activities such as leisure travel, energy consumption to mention a few. It needs to be seen in a holistic sense where the components has a place in a larger picture. Triangulating different types of data is useful for this purpose.

First hand encounter with a world that you know little about is a way to gain understanding. To be present for the ordinary and mundane as well as the exceptional and the extraordinary events in peoples lives brings insights. Some events and activities can only be understood through observation as they occur, for example peoples patterned movements through for example; shopping malls, airports or convenience stores. There are many methods that can be applied, but I will just mention a few. One very useful method is observation. People say one thing and they do another. This is especially true in shopping behaviors, child rearing, recycling and health habits. Many respondents are concerned with their image and report behaviors that they know are more socially acceptable. Some attempt to please the researcher and some are actually not aware of their behavior because it has become habitual. There is also an aspect of limitations of the human memory and the complexity of social life. The observation method can move in the range of observer-participant to participant-observer, meaning moving from quietly observing discrete yet in a strategically chosen position to the researcher actively partaking in the events being observed. When being part insider and part outsider descriptive data can be collected through this type of fieldwork (Bryman, 2001).

Interviewing is another valuable tool in the ethnographic toolkit. There are three different techniques or styles of interviewing; unstructured, semi-structured and structured. In the early stages of fieldwork the interviews often tend to be more open-ended and unstructured. As the project progres

ses the interviews tend to move towards a more structured form. Interviewing people in their familiar settings, establishing and maintaining a good contact as well as taking the role as the apprentice and letting the responder be the expert are good ways to establish valuable relations and receive useful insights and information.

Other ways of becoming familiarized with the world of the people one wishes to design for is video taping or the use of self-reporting tools. This could involve letting the participants write about their whereabouts and other activities relevant for them in a provided diary or let them create visual stories by the use of their mobile phones, taking pictures or video filming their lives (Blomberg et al., 2002).

5. Design process

I met with Nilsmagnus Sköld who is the coordinator and in charge of the artworks at all the hospitals within Region Skåne which Helsingborg hospital is a part of. I was given information about the new building and the thoughts around which it is going to be built. I was informed about the materials they will use on the exterior as well as on the interior of the building. He told me about how they had incorporated evidence-based design ideas when making architectural and planning choices as well as the salutogenetic perspective. The hospital wishes to promote bodily activity so they will be implementing a system for the reception area encouraging movement opposed to sitting in a chair while waiting for your turn or your doctors appointment. Glass walls and windows will be used in order to let as much sun light into the space as possible. Courtyards are built within the building to bring nature closer. These decisions are made with the human body in mind considering the healing process is better when the body can be active and in close proximity of nature and sunlight. This, of course, also creates a good and healthy working environment for the hospital staff that will be inhabiting this space on a daily basis. I was provided a mission statement including information about what they wished to see created in these stairs, an interactive installation making patients and staff use the stairs in lieu of taking the elevator.

5.1 Research

I began with doing some research on cornerstones of the thoughts this building lies upon which led me to search for literature about the salutogenetic perspective, evidence-based design, health care design, health issues, lifestyle, exercise, diseases, stairs among other topics.

5.2 Field studies

I made a few field studies where i spent some time in various locations to achieve a better understanding of the space and the people using that particular area.

5.2.1 Observations at Helsingborg's hospital.

As you enter the hospital in Helsingborg you are immediately directed by signs towards the center of the main building. This is where you will find the elevator hub. The elevator hub is a fairly large circle shaped area equipped with 8 spacious elevators. There are signs telling you where to find the

stairwell but they are fairly well hidden. I spent around 4 hours in this room to observe the daily ongoing activity. Many people use this space since this is where the elevators are located, but this is also to where you have been directed with signs along the way. This location is much used by both people working in the space as well as patients and their families and friends. This elevator hub se-emed to serve both as a mean of vertical movement but also as a social meeting spot as many peop-le ran into each other, accidentally or intentionally.

During the 4 hours I spent sitting on a bench observing people as they moved through the space was that very few actually used the stairs. There are two stairwells in the area, both slightly hidden from the elevator hub, but located close by, right around the corner. The signs telling you that these stair-cases exist are small and not too visible. My guess is that the few people that used the stairs either work in the space or have visited this hospital before and are familiar with the whereabouts. I carri-ed out these observations on the ground floor since this is where i found the most people in move-ment and from that point they will all be moving in an upward manner. I wasn't too interested in the descent since it is not as beneficial for the body as the ascent is. Reading my notes from that day tells me that less than 20% of the people using the space that particular day chose to take the stairs instead of the elevator.
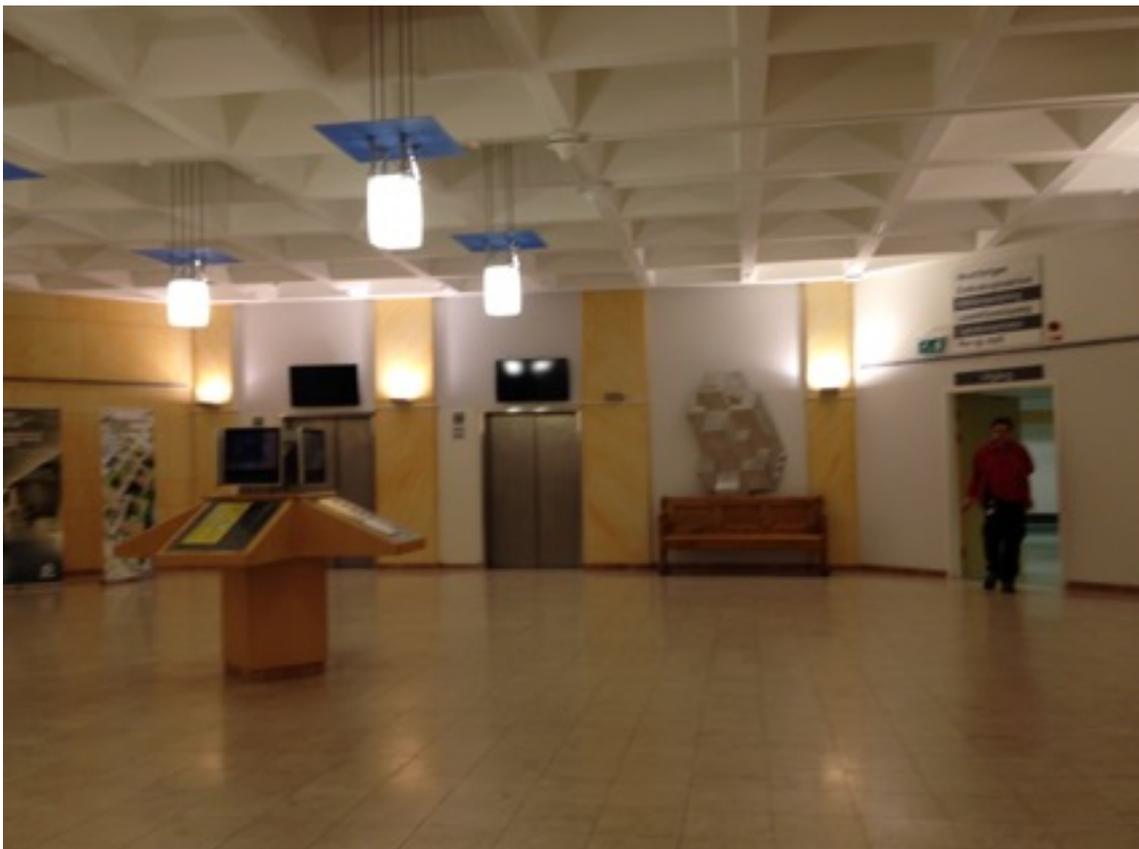
I went to the hospital that day just to see how people move around in this specific space. This seems to a poor way to build if you wish to encourage bodily movement and promote an active lifestyle. From the second you walk through the doors to this hospital you are, as I have stated earlier, taken directly to the elevators. Under those premises it is harder to make a healthy choice. You are guided to the elevator and there are no visible signs telling you that stairs exist. If you do find the stairs they are narrow and spiral making it even harder for people to use. I tried climbing the stairs and at one point there was a woman descending as I was ascending and it was a little hard for us to pass each other.

I believe that when the hospital was built in 1975 todays lifestyle diseases were not as prevalent as they are today and encouraging people to activate their bodies in this way was not an issue.
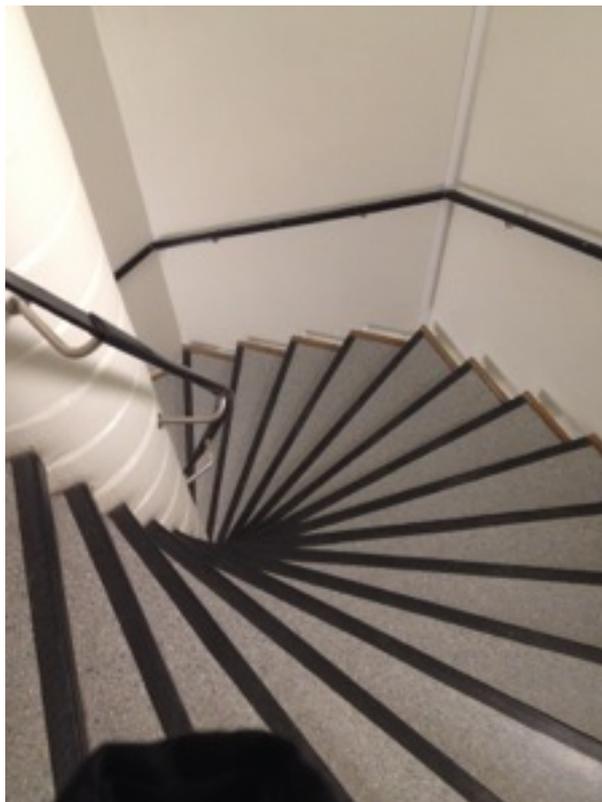
Aim

To make myself a picture of what the existing hospital looks like and how the space functions today. The building I studied is not the building in which the new staircase will be built.

Findings

It seems very clear to me that there is an obvious problem with accessibility stair vs elevator. There is not really a choice provided. Few people takes the stairs and they are hidden. This is not promoting movement, but increasing levels of passivity. Contradictory to the human- centered thoughts that the new building will be built upon.

5.2.2 Observations at Malmö hospital

I went to the hospital in Malmö to make some further observations on stair vs elevator use in a hospital setting. I was there on a Friday and unfortunately there were not many people around that day. I started my observations in the main entry area where both elevators and stairs are located. The stairs were placed behind the elevators and behind a glass door. They were fairly visible to people entering the area but hardly inviting. The stairwell was quite dark making it hard to know where the stairs would lead you and if you even are allowed to use them. The signs were all pointing towards the elevators and the few people that I encountered, around 20, all used the elevators to move themselves upward except for one person who climbed the stairs. After having spent some time in that part of the hospital I changed location. I found a part of the hospital that seemed to be brand new. It looked modern and I was hoping to see a different solution to the elevator/ stair situation. In this building the stairs and elevators were located right next to each other making them both equally visible for the user. They were easily accessed and the first bit of wall on the side of the stairwell was made of glass creating even greater visibility. The stairs were well lit and painted in light and inviting colors. The stairs were wide and people could easily pass each other. Here it seems like people really have a choice. I did not run in to many people in this area either but the few people I saw were mostly using the stairs. 80% of the people were using the stairs. It seems like the architecture plays a big roll in creating choices for people. Accessibility and visibility plays a big part.

Aim

After doing observations in Helsingborg's hospital I felt that I needed more input. I wanted to see how other hospitals have dealt with this issue and if it follows the same type of pattern.

Findings

I could clearly see that the older building had similarities with the hospital in Helsingborg. During the time these hospitals were built the health advantages of activity was not taken into consideration. In the newer part of the hospital the architecture was very different. The architecture was carried out in a human centered way where the choices were obvious and easy to make. Easy to make a healthy choice.

At this point I had learned a lot about health and lifestyle issues and what is beneficial for the human body by observing people, reading articles, books and searching the internet. I was not sure I wanted to create something "blinking and beeping" to lure people in to climbing the stairs instead of using the elevator. I was thinking about motivation and if there is a possibility to motivate people enough to make the choice by themselves.

I wanted to know a little more about motivation and if I could take a step back and change peoples behavior in an other way. It was, at the time, not interesting to me to attract people by things like light and sound. I wanted them to make the decision themselves and not feel forced. The architecture of the building in not something I can change. Uncertain of what direction to take I decided do make some more field studies. I was wondering about if people are aware of their choices.

5.2.3 Interviews at Orkanen, Malmö högskola

Standing on the top floor (5th) I asked the same question to 10 people arriving with the elevator and 10 people arriving by foot, climbing the stairs. The question was; Why did you use the elevator in favor of the stairs? Or; why did you use the stairs in favor of the elevator? In this building the elevator and stairs are located right next to each other and stairs are easily accessible and visible.

Answers from the elevator users:

1. Laziness, i have just been to the gym so i have done my exercise for today.
2. In a hurry, I didn't put enough money in the parking machine and need to quickly pick something up. Normally i always take the stairs!
3. In a hurry, money parking. I might be in a hurry
4. Muscle soreness, my legs hurt from working out.
5. Will reach my destination quicker
6. Faster. It is warm as well.
7. Habit. I only come here for the library and there are too many floors. I walk if 1 or 2 floors only.
8. The elevator came, it was right there when i arrived so i took it
9. Too many floors, too painful to walk
10. Too high up, I don't have the strength to walk.

Answers from the stair users:

1. Did not want to wait for the elevator
2. Didn't have the patience to wait for the elevator, it takes too long
3. I was on the 3rd floor so walking to the 5th floor was not so far. I also wanted the exercise.
4. Feels good to move my body a little and take a break from all the studying
5. I need to become healthier.
6. Afraid of elevators!
7. Friend of the "afraid of elevators" girl, climbs stairs together with friend
8. Exercise reasons
9. I was just one floor under. I usually always take the stairs for exercise reasons
10. Such a short bit! I started on the 3rd floor!

Aim

To see if people were aware of the choice they had made and how they felt about it. I was not sure about what I wanted to ask them so I started with this one question to see where it would take me.

Findings

I could clearly see a difference in expression of feelings by facial expression and body language in the two groups. The elevator users did not seem as happy being asked this question as the stair users were. The elevator users seemed to be, in greater extent, feeling ashamed over their choice whereas the stair users seemed proud of theirs. It seemed like both groups were well aware of the choices they had made. Shaming can create behavior change but is that desirable? It is a short term behavior change and will not be long lasting.

Research

Literature searches for information about motivation and how to change a behavior within the field of health and lifestyle. Intrinsic vs extrinsic motivation towards behavior change.

5.3 Provotyping

At Orkanen, Malmö Högskola there are three elevators right next to the main set of stairs. These elevators are all quite small and not made for carrying more than a few people at a time. The provotype i installed in the elevator was to begin with just a regular chair. The aim was to provoke people by the chair wanting to invite them to sit while riding the elevator. The point being to pose the question if it would not be lazy enough just using the elevator but also sitting while you are in there.

Test 1.

I placed a chair in the elevator and I placed myself on different floors for different lengths of time to observe peoples reactions to the chair. After observing people walking in and out of the elevator for some time i realized that it would be interesting to hear what they are talking about when inside the elevator, if they are talking about the chair at all. I also wanted to know if people are using the chair for its purpose. Are they using the chair and what do they say about it. I heard comments made by a few groups of people as they were entering the elevator together. Comments they made was about

this being some "social experiment" or just stating to each other that there is a chair in the elevator. No really useful comments for me.

I decided to ride the elevator up and down, walking in and out pretending I was using the elevator to get to another floor. I was trying to be as discrete as I could, but my presence in a small elevator is not easy to hide. I felt as if it was clear to others that I was a part of the experiment. But this I am not sure of. People riding the elevator alone did not say much. Some people didn't even seem to notice that anything was going on, they were busy checking their phone or listening to music being in their own world. Some groups of people talked a little about it but it was not clear to anybody what it was. My presence might have made people less talkative.

Test 2.

Placing a chair in an elevator was obviously not a clear provocation. It didn't make much sense but I wanted to continue the prototype and take it a bit further. What if I add more things to it. What if I also provided candy for the people in the elevator. Maybe that could make the provocation more obvious. If this could make people stop and think about their health choices and be provoked by the thought of not only riding the elevator sitting down but also eating candy. It was worth a try. I bought some individually wrapped candy and made an origami paper bowl to put them in since I did not have a regular bowl to use at the time being. I placed the paper bowl with candy inside on the side of the chair and attached it with stick-on velcro on both chair and bowl. I placed the chair in the elevator and went for yet another ride up and down the elevator listening to what people had to say. People were quite pleased about the candy. I had to refill the bowl many times. Some looked like they wanted to take one piece of candy but didn't dare, not knowing what was going on. Unsure of why there is candy in a bowl stuck to a chair which is placed in the elevator. Some people dug right in. Some people took one or two and some people took a handful. Again, most people that were talking about the chair were in groups. I heard two people in total that were talking about the chair and candy and how "bad" that was. To sit in the chair while "chugging candy down your throat". So it seemed as if a few people did get the message after all.

I was still not satisfied. I wanted to hear more comments and I wanted to know if people talked about it more when I was not there so I decided to take it a bit further.

Test 3.

I wanted to be able to hear what was going on in the elevator but not having to be in the space myself. I needed to add some technology to the provotype. I strapped my phone to the underside of the chair so it would be well hidden from people using the elevator. In an adjacent room i had my computer with which I made a Skype call to my phone and kept the line open. Again I placed the chair with a bowl of candy and my phone strapped to it in the elevator and placed myself in front of my

computer in a room not too far away from the elevator. I was hoping to hear them talk about the chair, but it was difficult at first to know if they were just not talking to each other or if it was difficult for me to hear what they were saying. I heard sounds coming from people inside the elevator car but i could not hear their exact words. Would they speak louder if they were verbally approached? I made some sounds to test but there were no reactions to that. I started talking to them, giving them instructions, but I could never hear well enough to know how that was received. The technology was not working well enough for me to hear what was going on and if there were any reactions to my voice at all.

I dismounted my phone from the chair and put the chair and candy back into the elevator. Most people using the elevator are going from the bottom floor to the top floor where the library is located. I sat on a bench facing the elevators on the top floor observing people exiting and entering the elevator. At two occasions I saw someone sitting in the chair as they reached the fifth floor. It had become quite late in the afternoon at this point and not many people were using the library anymore so I stopped the experiment there.

Aim

To see if I can provoke people and make them think about what choices they make. Can I create some sort of wake up call? If people are aware but still make poor health choices, what can I do to change this if anything at all.

Findings

It is difficult to create a provotype. It needs to be better thought through on all levels. Need to be clearer with the goals of the testings and have a better idea of how to achieve the desired goals. The message needs to come across in a more sophisticated manner and people must be able to understand the installation in order to react on it. I should have interviewed the participants afterwards to receive useful feedback. From these testings and with the research done on motivation and behavior change I realized that what motivates people differs from one to another and are dependent upon so many other issues that I felt it was no longer a feasible path to move along. Provotypes needs to be understandable and the technology must work properly. Decision making is very complex.

5.4 New research. Expressive writing

I did a lot of sketching, internet searching and literature reading. I looked for inspiration from all sorts of directions, iPad games, music video's and magazines. I did not want to create anything that was intrusive in any way. I wanted to create something subtle that people can be a part of only if they wish to as well as something that was rewarding in a meaningful matter. The health benefits of stair climbing is there to begin with but there needed to be more to it. It can not be loud or bright in a way that could trigger psychotic patients. I wanted to respect the people that I am encouraging to use the stairs and to not be interfering or intrusive.

I came across something called Expressive writing and I read about the healing properties of writing and expressing your thoughts. How putting words on emotions and thoughts can be very healing. I read further about the art of writing and the benefits of expression (Svenska Dagbladet, 2016). There are various types of expressive art therapies available and they have been increasingly essential in many health facilities. The therapeutic relevance of poetic expression has been studied and found having valuable healing powers. Creative and therapeutic writing strengthens the process of self- discovery and helps with communication (Heimes 2011).

Poetry has for a long time been a way in which we explore the human condition. In early societies poets were seen as being the documenters and interpreters of people and their lives. They were the first to be tapping into the mysteries of the human psyche (Kathryn S Collins et al. 2006). The influence of poetry has decreased over the years but the power of poetry as an important tool for human development and for healing purposes have increased. Self-directed expressive poetry can help people after traumatic or difficult event have occurred to understand themselves and their emotions being of great help in the recovery process (Stepakoff, 2009).

American researchers have found that when young rappers where improvising with words, creating free-style rap the connections between the areas in the brain that deals with language, movement and emotions were opening up. As this was happening other functions of the brain dealing with surveillance and control took a step back leading to decreases in self control and opens up for a state of flow. Flow being a creative state of mind where ideas come freely (Språk, 2013). Improvised stage

poetry is an art form closely related to free-style rapping. Swedish winner of "improesi" (improvised stage poetry) in 2012, psychologist Michael Horvath, explains that during three minutes you must improvise poetry from words that are being displayed on a screen in front of you. These poems fall somewhere in the spectrum between confusion and meaningfulness he says.

I wanted to incorporate words in the staircase adding additional meaning to the journey from floor to floor. I wanted to see if people could use this time to express themselves and put words on thoughts and emotion and feel a bit better afterwards. Some kind of semi improvised expressional poetry.

5.4.1 Workshop.

I wanted to test the idea of creating poetry using words that were already provided/chosen for you. The first thing I needed to prepare for this workshop was collecting and choosing the words that I would bring to the session. My initial thought was to just write down the first words that came to my mind. That didn't work very well since I had a hard time deciding what words could stay on the list of words to use and what words could not. I couldn't decide on the categories of words either. If they should concern a certain topic or be just plain random, which is impossible when coming from one human being. So, I turned to the internet and searched for a while until I landed on a website where an interesting article was posted (Thoughtcatalogue, 2016). 40 Words For Emotions You've Felt, But Couldn't Explain. This article gives you 40 of author John Koenigs Dictionary of Obscure Sorrows and was a pleasure to read. I decided to read about the 40 emotions and write down words from the text that I liked or that was on some level interesting to me. After having read the article I had a little over a hundred words written down on a piece of paper in front of me. I cut out smaller pieces of paper and wrote one word on each piece of paper adding a few necessary words to the mix such as me, you, and, or etc.

The workshop took place at the library in the Orkanen building at Malmö Högskola. Apart from myself two participants were invited to join. We engaged in a few rounds of creating poetry with the words I had brought.

Test 1

We were all given 8 randomly chosen words and were to create poetry out of those words. After a few minutes we took turns in presenting our poetry to each other. It worked quite well and we did a few rounds like this where we were given 8 new random words and were again to create poetry out of them.
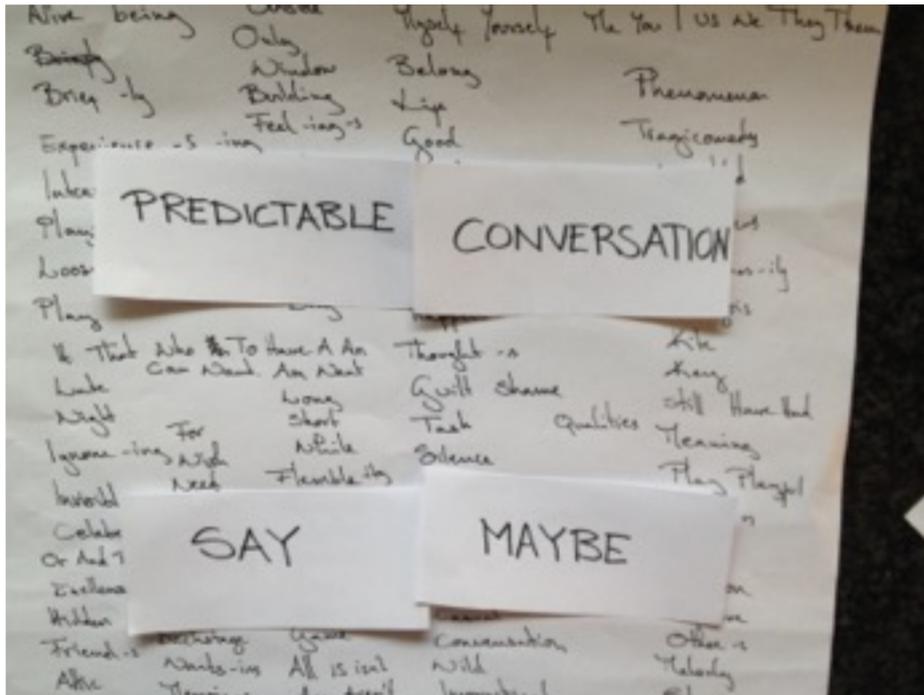

Test 2

This time we were all given three words at a time and we could choose one word per round. There were 8 rounds in total so all of us would end up with eight words each. When this was done we would take a minute to create a poem and then discuss it within the group. This test was repeated twice.
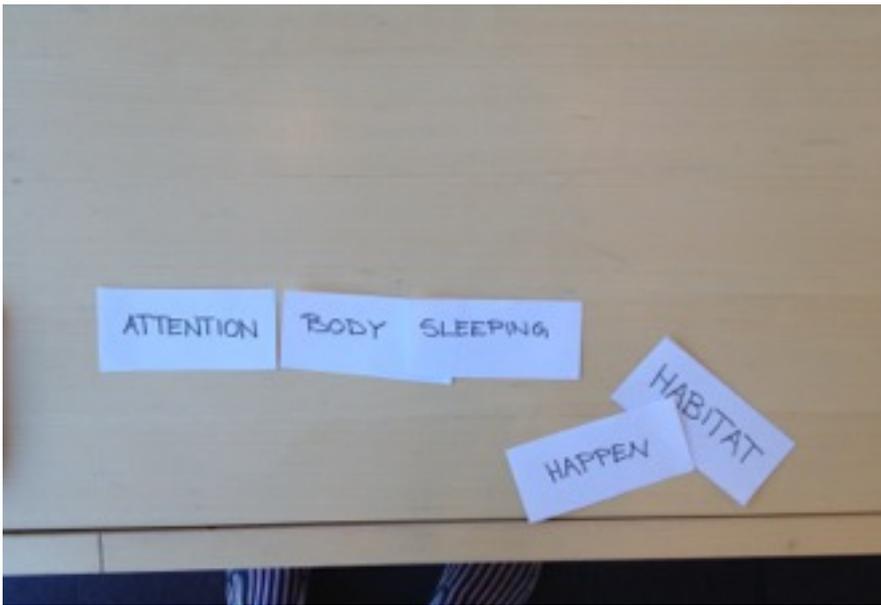
Test 3

Again everybody was given three random words to choose from but this time it was allowed to save as many as you wanted to. If you wanted all three you could take them and you could discard them all if that was what you wanted. We did a few rounds dealing three words at a time to choose from until we all had the amount of words we wanted. Then we took a minute or two to create the poems and then a short discussion afterwards.
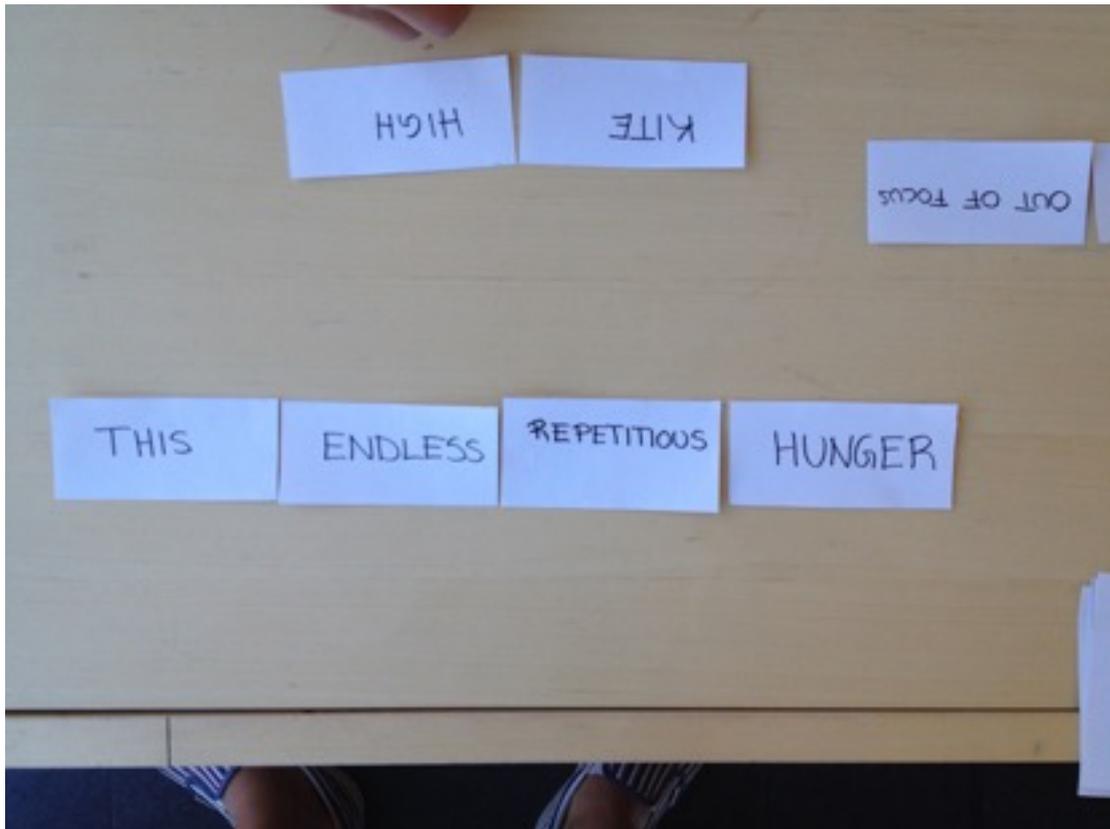
Test 4

We repeated test number 3 but this time there was no pressure in having to tell the other participants about your poem. We could all see what had been written, but no one was obliged to share his/her thoughts around it. This in an attempt to keep it private and take away some of the pressure that might come with having to present your creation.

Aim

The purpose of this workshop was to see if it was possible to create poetry with the words given and if it could provide meaning to the poet him/herself. If the participants felt like it filled a purpose and if it felt good for them to partake. I wanted to know if this is a task that was easy or difficult to engage in and if it was rewarding to the participants in any way.

I also wanted to know if the words I had chosen for this workshop was enough for the purpose and if meaningful poetry could be created out of these words.

Findings

The participants showed great interest in both the workshop and the topic and the two participants expressed that it was an enjoyable task to engage in. We were all fascinated over how well these words worked together and how easy it was to create a poem that was of interest to us. It was a fun and positive workshop because it went so well and we were all very happy about the poetry making. One of the participants even took a photo of one of her poems feeling the urge to save what she had expressed. She knew that the poem would not last and she wanted to hang on to it. I was told that it was easy to make sense of the words given and it was easier to be creative when the words were limited. Another participant expressed that she liked the words I had chosen and that they were nice words to play around with

I decided to keep working with words and to create an interactive installation in the stairwell at Helsingborg's hospital where patients, visitors and staff can unburden their hearts, vent their emotions or just write a poem for the good or fun of it.

After deciding that words was what I wanted to work with, I kept finding more and more evidence, articles on expressive writing in the newspaper, literature and internet searches and through talking to friends, that words and poetry really could work well for my purposes. Next thing to deal with was how to present the words within the installation. I needed to think about how the words will appear in the space and how the stair users will choose or activate them. What will happen to the word you choose and how and where they will be presented. Do you use your arms or your legs or to catch the words or are there other suitable ways. I needed to figure out what movements would feel right to engage in while walking a set of stairs. I did not want this installation to be too intrusive and not to be too demanding for the participants. I wanted it to be smooth and very simple and not being in the way if you wish to not participate, if your wish is to climb the stair without any interference at all.

5.4.2 Bodystorming

This body storming session took place in the large set of out door stairs at Anna Lindberg's plats close to Malmö Högskola. Me and one other participant were walking up and down the stairs trying to figure out the most natural way of catching/ choosing/ activating a word while walking up the stairs.

Aim

To figure out the possibilities of choosing the words. What body parts are best suited to use for this motion and what would those movements feel like. What motion would feel like a somewhat natural action and will not be too demanding or feel awkward to engage in.

Findings

We found that stepping on words resting on the floor felt easy and natural to us. To set that action apart from the regular setting one foot on each step to climb the stairs, we found that if you had to place both your feet on a particular spot, the word will then be recognized and activated.
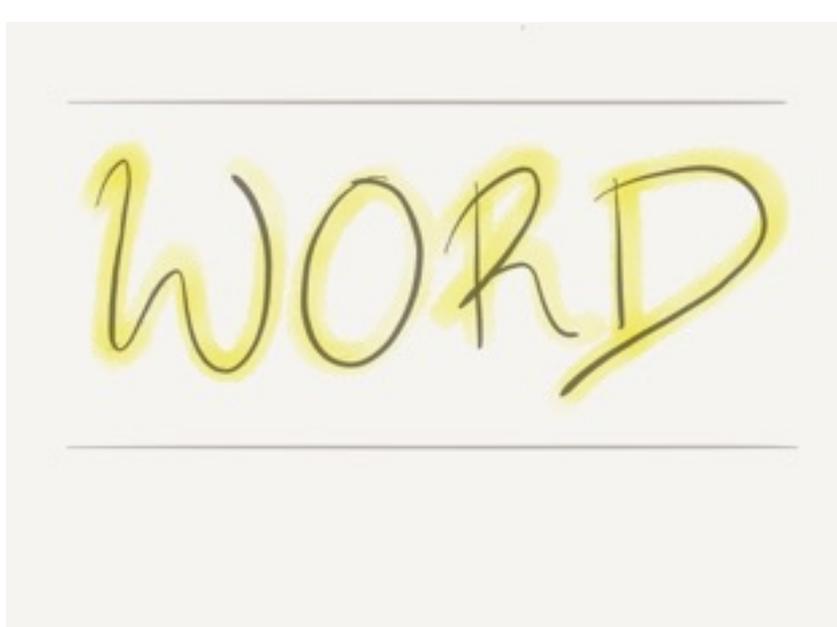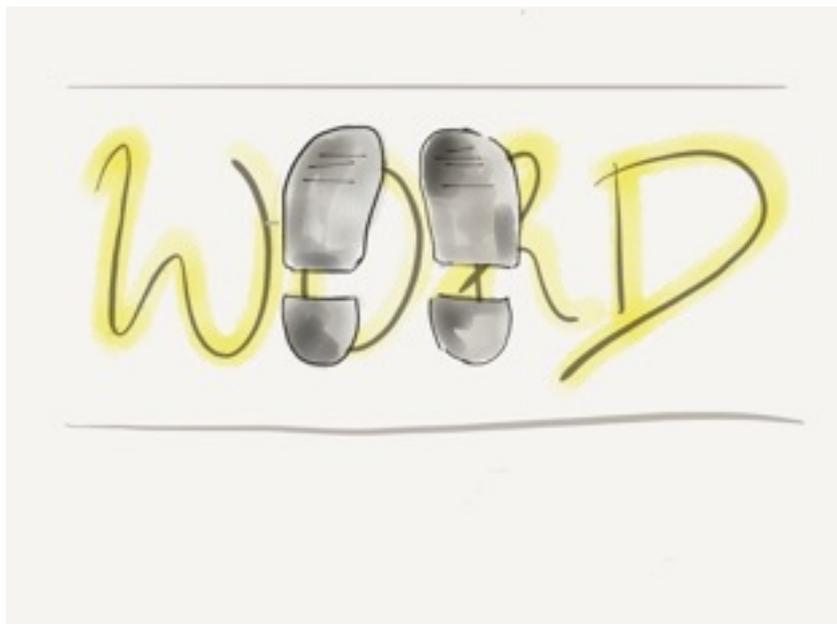
6. Poetic stairs

Words will be displayed on each step in the staircase. The words will light up as you walk upward creating a choice of two or three words for you as you move along. By placing both your feet on the word you have chosen you will "activate" that word. As you walk up the stairs you can activate as many words as you like slowly creating sentences. When you reach the top of the stairs your sentence or poem will be displayed for a short period of time. These poems are not intended to be saved in any way or shown to anyone else. They are just there for you and for your own benefit. For your own personal expression.

Foggs Behavior Model:

Poetic Stair- Motivation: High. The stairs are engaging and enjoyable as you choose words and activate them as you go. The stairs provide instant feedback for the users as the poem is shown on the last step. Ability: Easy to do. Only requires walking a set of stairs and placing both feet next to each other in order to activate words while walking upward. Triggers: Seeing other people engage in this activity causes curiosity and creates an interest together with the visible aspects of viewing the words on the stairs from a distance.
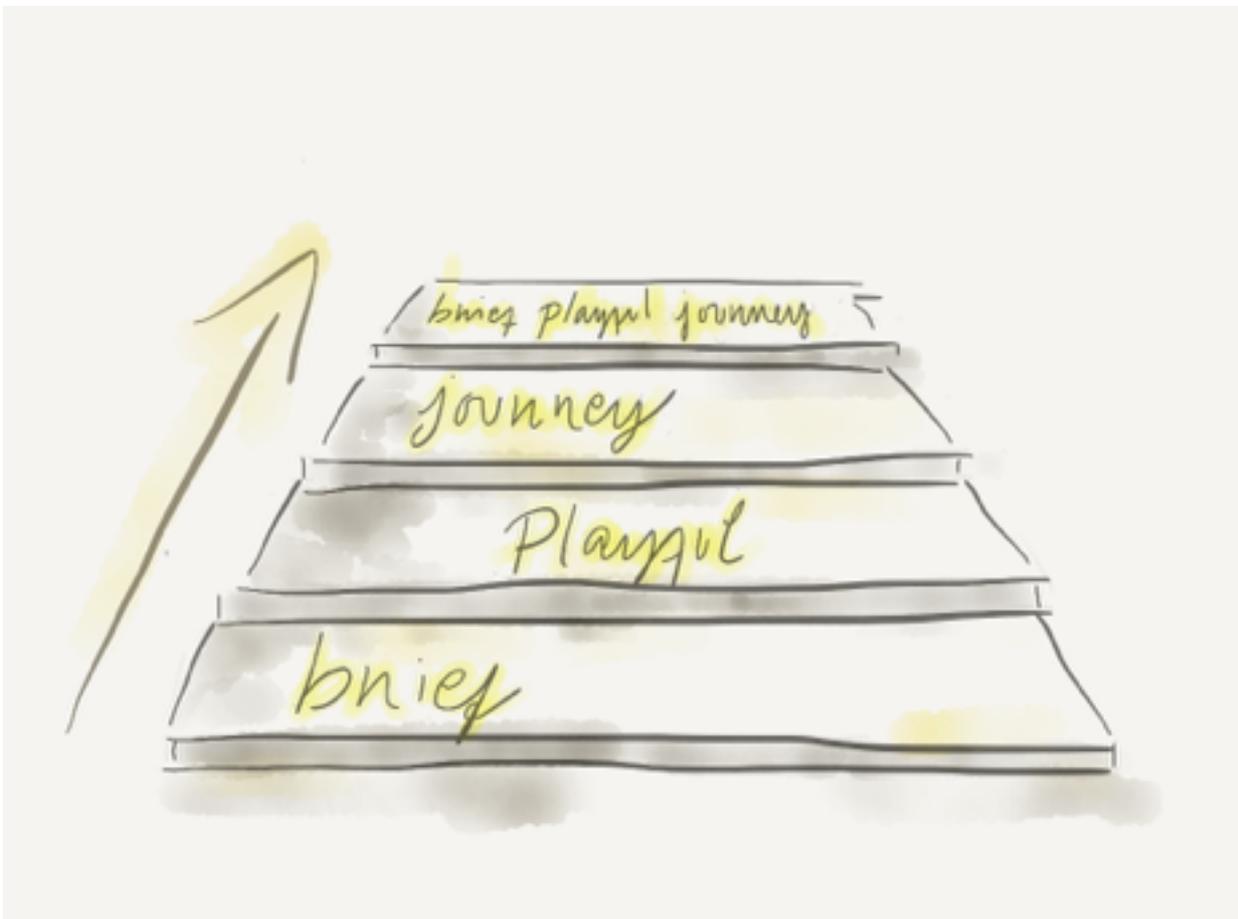
7. Result

Answer to the research question.

Q. How can I, with the use of interaction design and with the salutogenetic concept in mind, create an interactive installation in the staircase to promote a healthy lifestyle choice.
- Through the implementation of Poetic stairs in the staircase I will hopefully make more people choose to take the stairs instead of the elevator when visiting the hospital in Helsingborg. Through the use of intrinsic motivation and BJ Foggs behavior model try and motivate people to become more active. In these stairs you will increase the energy expenditure over the course of the day contributing to the overall amount collected in one day.

7.1 Critical reflections

I have spent a lot of time reading literature about various topics dealing with health in many aspects, decision making, motivation etc. It has been very interesting and at times hard to stay on the right track having many possibilities. Regarding the provotype, I wish I could have developed it further to see where it could have taken me in understanding the mechanisms of behavior in the domain of decision making, and to see if I can manage to provoke people in a satisfying manner. Feed back from people using the elevator during the time of he provotype would have been valuable.

I have not dealt with the issues that arises when there are more than one person using the staircase at the same time. If kinetics are used to track a persons movement then that might be tricky if one person is walking behind. If RFID-tags or such are to be used then they need to be attached to the people that wish to partake which is not an optimal solution either. Being only one person at a time, sensors can recognize that there are two feet on this spot and remember that. It can put the words in order so that they will be displayed on the the top of the stairs as a whole sentence. I believe that the issue with more than one person using the stairs at a time can easily be solved.

8. Discussion

I found this project very interesting but also quite demanding. There were many things to take into consideration and many paths to choose. At times I had difficulties in choosing in what direction to move and to distinguish what was essential for the process and what was not. I was challenged by the intriguing possibilities of the project and the need for organizational skills. There are things that I would do differently if I could do it again and with use of all the insights that I have gained. This has been very informative, educational and highly enjoyable.

8.1 Further research

If this project could continue I would look into possibilities to spin the poetic staircase around some more. To explore the boundaries of the concept and seek further challenges, perhaps examine the possibilities of creating a playful communication tool for the hospital staff.

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