Slowing Down in an Impulse-Permeated World

WHAT WE CAN LEARN FROM PEOPLE DIAGNOSED WITH AUTISM SPECTRUM DISORDER REGARDING THE DESIGN OF (SEMI-PUBLIC) SPACES

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Abstract

There are more diagnoses of autism spectrum disorder and the world is more and more demanding of our directed attention. This can lead to Directed Attention Fatigue which leads to heightened arousal. Per the Yerkes-Dodson Law, heightened arousal lowers performance in simple and especially in complex tasks. People who are diagnosed with autism spectrum disorder might view a social task (often needed in a semi-public space) as a complex one which a neuro-typical person would view as simple. The objective is therefore to lower arousal. The environment also has a very large impact on a person. It is therefore wise to see how that could be used in lowering arousal. The main question in this thesis is therefore: what design elements could be improved with help from autism spectrum disorder to improve the experience and perception of semi-public spaces? The difference between people diagnosed with autism spectrum disorder and neuro-typical people lies in individual differences, situational factors, social conditions, cultural factors and how they are able to cope. The design elements that therefore be valued more are privacy, spatial crowding, illumination, general stimuli and nature.

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Growing up, my own brother was all I knew about brothers and how they act. As I grew up however, I started noticing he didn't always behave like other brothers. His dislike for semi-public spaces became apparent and at a certain point we had the opportunity to go to the Olympics but he declined. At the time I found it unfathomable but looking back now, I am starting to understand. Since then, he has been diagnosed with autism spectrum disorder.

1 Introduction

There is an increase in the number of people diagnosed with autism spectrum disorder (Gernsbacher, Dawson, & Hill Goldsmith, 2005). This is happening because of the widening of the criteria for such a diagnosis and public and heightened professional awareness (Gernsbacher, Dawson, & Hill Goldsmith, 2005). Since more people are being diagnosed with the disorder than ever before, there is a growing awareness of the problems that individuals with autism spectrum disorder are confronted to in life.

One of those problems may be "directed attention". Directed attention is attention that is used while focussing. There is a finite amount of this attention available in a person and after prolonged demands, that pool can become depleted (Bell, 2001). People diagnosed with autism do not have a smaller "pool of attention" than others to fish from, but they do have more of the attention seeping out when having social contact (Frith, 1989, 2003). When a person's directed attention pool is depleted, they can go into a state of directed attention fatigue (DAF) which causes arousal. This could result in irritability, difficulty concentrating and increased mental errors (Bell, 2001).

DAF occurs in both neurotypical and neuro-a-typical people. In this ever-quickening, digitised world, people are bombarded with impulses that require a persons directed attention and are therefore more prone to DAF. As discussed, this is more visible in people diagnosed with autism. So by looking at how they are affected by their surroundings, we could learn how to design (public) space in a way that could help combat DAF and be beneficial to everyone.

Conventionally, people diagnosed with autism don't like going to places like the airport, hospitals or city hall; semi-public spaces. These places could be considered a necessary evil in living and participating in society as we know it. The hesitation people diagnosed with autism have probably in part has to do with the amount of people there, and things like the social

behaviour required. But it is also possible that the physical and spatial aspects of these spaces have an enlarged impact on individuals with autism. Hence, it is argued in this Thesis that the built environment may help facilitate in the reduction of arousal (and DAF) and thus, aid people with and without autism to participate (more freely) in society.

Firstly, it is wise to raise the questions of how the environment is registered. This is done through the first sub-research question:

How does a person register her environment?

Secondly, it is interesting to see how one is affected by ones environment. The second sub-research question is therefore:

How is a person affected by her environment?

To be able to see how people diagnosed with autism spectrum disorder differ from the norm, it is then important to understand what the diagnosis entails. This is done in the third sub-research question:

What does the diagnosis of autism spectrum disorder entail?

Furthermore, to be able to get a scope of how autism spectrum disorder affects the way people diagnosed with it alters the needs they have in regards to their environment, I pose the final sub-research question:

In what way does (the diagnosis of) autism spectrum disorder affect the way its bearers are affected by their environment?

All these sub-questions help in answering the main question posed in this thesis:

What design elements could be improved with help from autism spectrum disorder to improve the experience and perception of semi-public spaces?

The answers to the sub-questions create an image of how people register and are affected by their environment and what we can learn in that regard from people diagnosed with autism spectrum disorder. The last step is to translate that image to design elements, which will answer the main question.

This thesis will start by investigating the "Environment" themed questions. Subsequently the "Autism spectrum disorder" themed questions will be treated. Then, these themes will be combined with design in the third chapter "Design, Autism and Environment". This thesis will then provide a discussion and will end with the conclusion.

2 Environment

A person is always in an environment. Be it man-made or natural, a person is always *somewhere*. There are few (or perhaps no) places left on earth where man didn't have an impact, meaning humankind almost always shapes our environment. As Winston Churchill famously stated: *`We shape our buildings, thereafter they shape us.`* (Williams Goldhagen, 2017). Churchill states that the environment a person is in has a large influence on that person, which is something not to be taken lightly.

Sarah Williams Goldhagen states in her book *Welcome to your world* that there are three shifts to be made in the way we think about our environment: firstly, that *"What our minds think is largely shaped and profoundly influenced by the human body that we have."*. Meaning: everyone's experience is their own and there are no two experiences alike in the world.

The second is that *"much of our internal cognitive lives takes place outside of language and below the level of our conscious awareness."*. By *"outside of language"* Goldhagen not only means outside of *spoken* language, but also outside of *unspoken* (mental) language; thinking. The cognition happens, whether we have a say in it or not. (Williams Goldhagen, 2017)

This brings us to the third and last shift; namely that we are not *"the imperially sovereign agents over our experiences that we often believe ourselves to be, and more the environmentally embedded beings that a birds eye view of any human settlement would suggest."*. She states that while we may *think* we are in control, we are just part of the world with little say in our own lives. (Williams Goldhagen, 2017)

As Churchill and Goldhagen state, humans are far more subjected to our environments than we like to think. This is why there ought to be greater respect for our environment and why architects (the designers of our (man-made) environments) should have more knowledge about the influence the environment has on people.

2.1 PERCIEVING

The first question that needs answering is: How does a person register her environment? A person firstly perceives their environment through their senses. The information the senses pick up gets sent to the brain where this perception gets processed; cognition. Cognition is the further progression into thoughts, understanding and knowledge. (Bell, 2001)

Williams Goldhagen states that cognition is the product of a three-way collaboration of mind, body and environment. The body picks up information from the environment which the mind processes. But there is an addition to that, namely; blindsight (Williams Goldhagen, 2017). Blindsight is information gathered about the environment that hasn't (consciously) been perceived (Güzeldere & al., 2000). A person who is blind can still be affected by an abundance of colour. For seeing people, this is better explained as getting an unruly feeling when behind you (and out of earshot) a fire breaks out.

2.2 AFFECTING

2.2.1 Conscious/Non-conscious

As previously stated, a person is always in an environment, but they are also always affected by that environment. This happens either consciously or non-consciously. It happens consciously when a person realises they find it hard to study because the room is too dark. It happens unconsciously when the darkened room makes the person feel lethargic and gloomy without them realising it's because of the lack of light. (Williams Goldhagen, 2017)

2.2.2 The Environmental Load Perspective

A person has a limited capacity to process input and when one reaches capacity, overload or "tunnel vision" might occur. In tunnel vision, only the impulses deemed most relevant are given attention to. Furthermore, when a person expects a necessary response, more attention is required to begin with. When the attention available gets depleted, *Directed*

Attention Fatigue occurs. As stated in the introduction to this thesis, this could result in irritability, difficulty concentrating and increased mental errors. This can be combatted by *Attention Restoration Theory* (see chapter 2.2.6.). (Bell, 2001)

2.2.3 The Arousal Perspective

According to the Arousal Perspective and the Yerkes-Dodson Law, people have a higher threshold for arousal when performing a simple task as opposed to performing a complex task (see figure 1). (Bell, 2001)

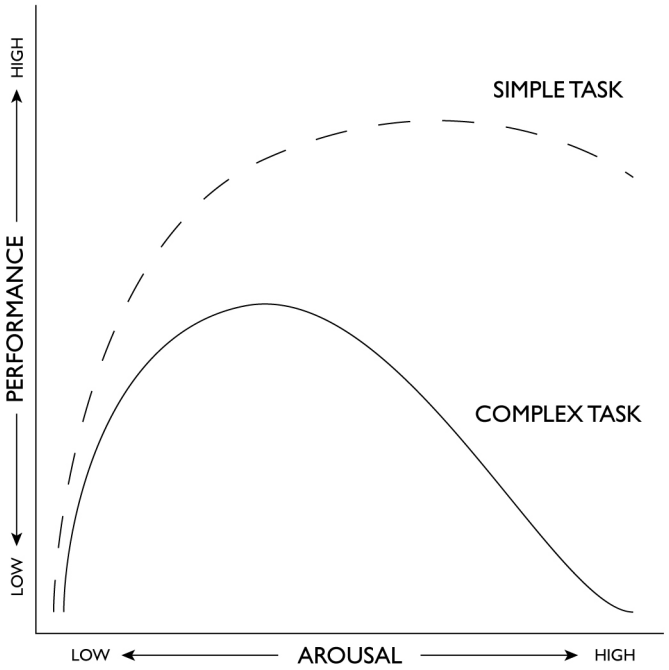

Figure 1 Yerkes-Dodson Law (Bell, 2001)

2.2.4 High Density

Generally speaking, high density leads to less liking of both people and places. High *spatial* density leads to more aggression (especially in males) while high *social* density leads to withdrawal and less helping behaviour. High density also leads to more arousal, which, explained by the Yerkes-Dodson Law, leads to lower performance in complex tasks. (Bell, 2001)

2.2.5 Bells Eclectic Model of Theoretical Perspectives

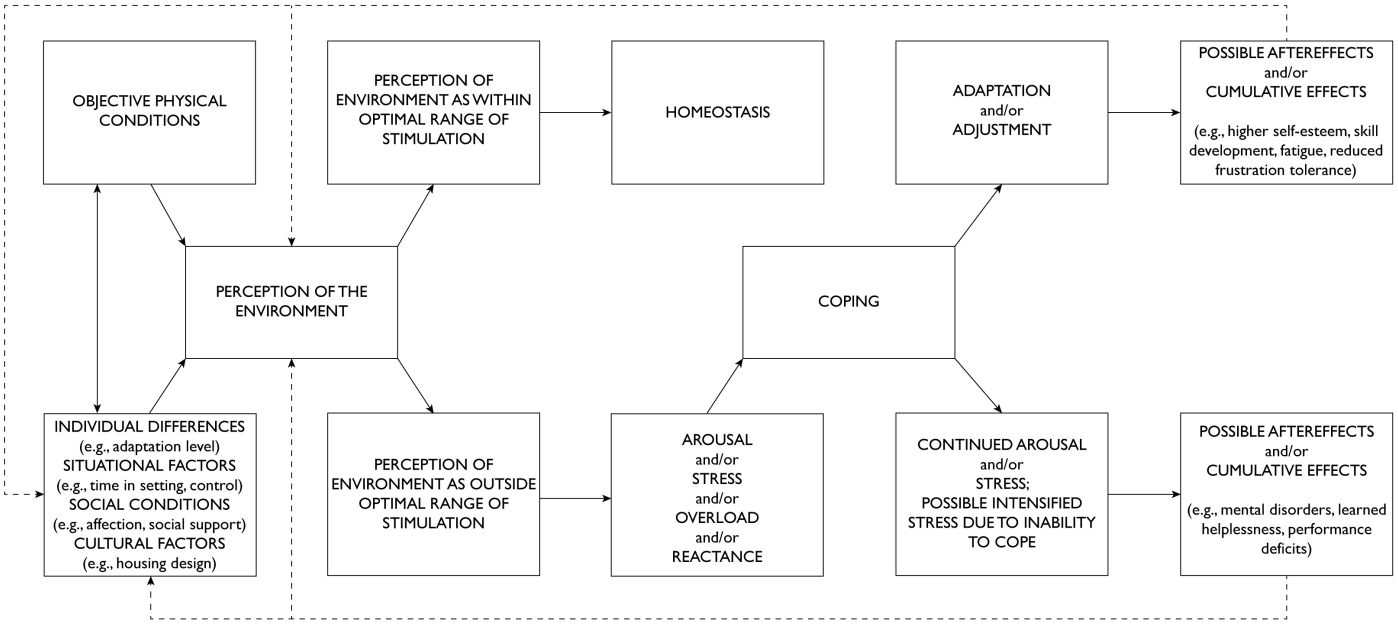

Figure 2 Bells eclectic model of theoretical perspectives (Bell, 2001)

In his book *Environmental Psychology*, Bell combines the various theoretical perspectives in an eclectic model of theoretical perspectives (see figure 2). This model is very insightful and will provide the groundwork for how this thesis handles being affected by the environment.

2.2.6 Attention Restoration Theory and Stress Reduction through Nature

As discussed in the introduction to this thesis, everyday life is becoming more and more filled with demands on directed attention, which is a finite resource. Attention Restoration Theory (ART) could replenish this resource. When researching the impact of nature on humans, Kaplan and Ulrich discovered something interesting.

2.2.6.1 Stress Reduction through Nature

Ulrich found in his 1991 article *Stress Recovery During Exposure to Natural and Urban Environments* that videos of nature calmed subjects down after a stressful film, where urban videos did not. In addition, he found that both the stressful and the nature films led to a slowing of the heart rate, which is associated with heightened attention while heartrates sped up during the urban films. This could mean that not only are people calmed by nature, they are also paying attention.

2.2.6.2 Attention Restoration Theory

Kaplan raises *fascination* as the solution to directed attention fatigue;

> *"According to ART, it is necessary to rest directed attention by finding a different, involuntary attention that requires little effort. Fascination provides this effortless attention."*. (Kaplan, 1995)

In his own way, he corroborates what Ulrich found in 1991; there are (at least) two types of attention, one that is consumed and one that restores or rests the other. Kaplan however,

takes it one step further by adding that fascination doesn't only treat stress, it can also prevent it. (Kaplan, 1995)

Stress Reduction through Nature and ART propose an addition to Bells eclectic model, namely that when "perception of environment as within optimal range of stimulation" is reached, it doesn't necessarily lead to just homeostasis. It could also lead to (positive) arousal and stress reduction which could lead to possible aftereffects and/or cumulative effects like higher tolerance.

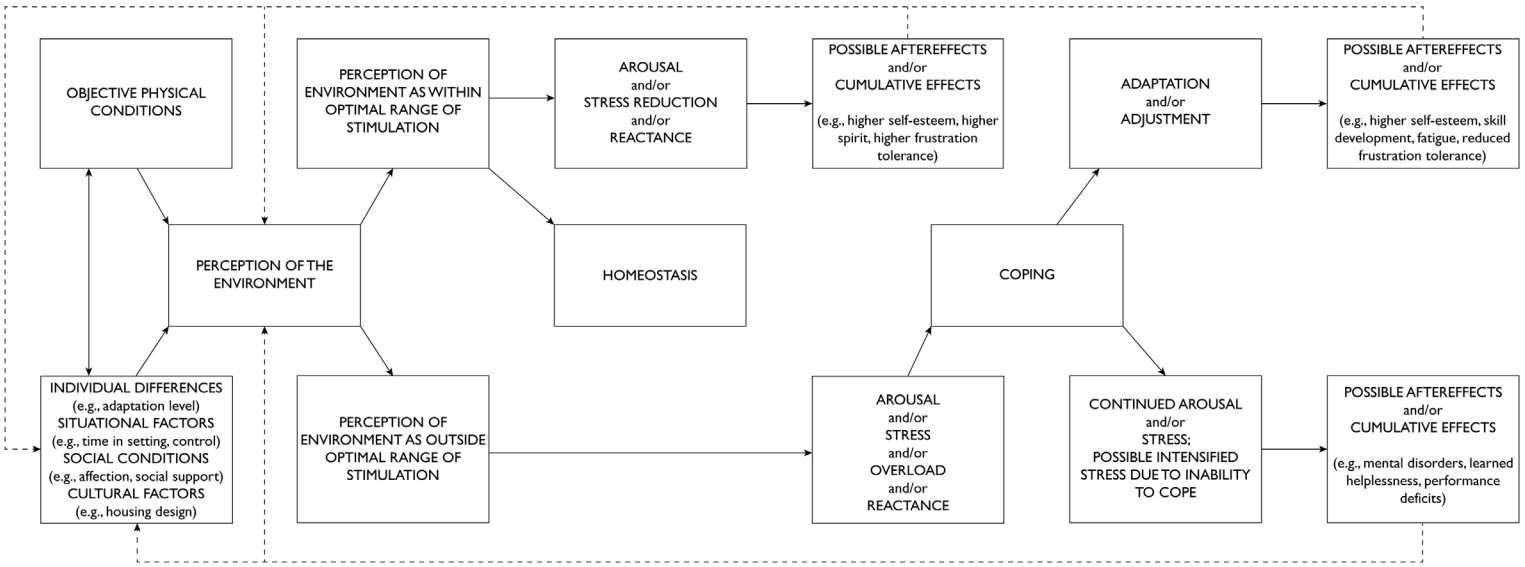

Figure 3 Eclectic model with ART adapted from Bell (Bell, 2001)

Bell has laid the groundwork for how this thesis handles being affected by the environment but the Attention Restoration Theory and Stress Reduction through Nature add an important side note to the model as seen in figure 3.

3 Autism

3.1 DIAGNOSIS

The criteria for diagnosis for autism spectrum disorder have shifted greatly over the years. Before 1980 the diagnosis was left completely to individual clinicians or specific researchers' conceptions. The first time a form of autism spectrum disorder was published as part of the Diagnostic and Statistical Manual of Mental Disorders was in DSM-III in 1980. There they stated six criteria which had to be met. In 1994, the amount of criteria rose to sixteen, while only half of these had to be met for a diagnosis (Gernsbacher, Dawson, & Hill Goldsmith, 2005). In DSM-IV, three criteria where upheld, namely: "lack of reciprocal social interaction, qualitative impairment in verbal and nonverbal communication and restricted repertoire of activities and interests" (Frith, 1989, 2003). In 2013 the American Psychiatric Association came out with DSM-5, which leaves only two criteria: "Persistent deficits in social communication and social interaction" and "Restricted, repetitive patterns of behavior, interests, or activities" (American Psychiatric Association, 2013).

In DSM-5, three severity levels are explained as shown in Addendum I (American Psychiatric Association, 2013). The autism spectrum ranges from moderate to severe. Every case is different and not everyone diagnosed will express the same symptoms in the same severity. The two main symptoms as described in DSM-5; deficits in social communication and interaction and restricted, repetitive patterns of behaviour, will be considered in this thesis.

3.2 AUTISM AND THE SEMI-PUBLIC ENVIRONMENT

The aforementioned deficits in social communication seem linked with semi-public spaces. Usually, one has a goal to reach in such a space and needs to talk to (unfamiliar) people to reach it, like talking to a teller at the bank to cash a cheque or talking to the stewardess to drop off luggage. DSM-5 elaborates on the communication criterium as:

> *"Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions."* - American Psychiatric Association, 2013.

Therefore, the interaction commonplace in semi-public spaces could prove a hinderance for people diagnosed with autism spectrum disorder.

In addition, DSM-5 elaborates on the repetitive criterium as:

> *"Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behaviour (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day)."* - American Psychiatric Association, 2013.

The inflexibility that this suggests, may also have a part to play in semi-public spaces. DSM-5 elaborates further:

> *"Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment."* - American Psychiatric Association, 2013.

Especially "hyperreactivity to sensory input" could prove very fruitful in regards to this thesis. Everyone in the same space experiences somewhat comparable sensory input but processes it in their own way. People without outward reactions to the input did experience it but processed it differently from people with outward reactions. This could have however depleted their attention and reduced their frustration tolerance, meaning: a next time there might well be outwardly reactions. Taking hints from people showing outward reactions could benefit everyone.

Additionally, Frith relates "hyperreactivity to sensory input" to the impaired ability to focus attention. Due to this impaired ability, the multitude of stimuli cannot be filtered, which leads to DAF (Frith, 1989, 2003). Geraldine Dawson states that evidence is found that young children diagnosed with autism show less attention to social stimuli, but not to non-social stimuli. This might be because they do not rate social stimuli as a more important kind of stimulus than non-social stimuli, because of their lack of filter (G. Dawson, 1998, pp. 479-485). While Dawson speaks of a lack of filter, Frith mentions a filter with an impaired ability to focus. Both have the same result, namely; Directed Attention Fatigue, especially in environments like semi-public spaces where there are lots of social- and non-social stimuli.

3.3 AFFECTING

As discussed above, the autism spectrum disorder diagnosis partly has to do with how a person is affected by their environment. Individual differences like the adaptation level are lower, the control desired is higher, social conditions like personal space might be more important and cultural factors like the probability of design are likely more important. Coping might also be more difficult because of the lack of social skills and a possible lack of self-esteem resulting from it, less adaptability, possibly more need of personal space, predictability and a need for sameness, routine and ritualized patterns.

In compliance with the Yerkes-Dodson Law; what a neurotypical person may see as a simple task, like talking to somebody, people diagnosed with autism spectrum disorder might experience as a complex task due to their deficits in social-emotional reciprocity. Additionally, a person diagnosed with autism spectrum disorder might be more aroused than a neurotypical person, due to their lack of functioning filter, making the already complex task even more difficult.

Even more, for every woman diagnosed with autism spectrum disorder, four men are diagnosed (American Psychiatric Association, 2013) and overall, men are influenced more by high densities than women (Bell, 2001). This could also lead to higher arousal (especially in the male population) and prove to be a factor in the affecting.

The way people diagnosed with autism spectrum disorder differ from neurotypical people in the way they are affected lies in their coping skills and in individual differences, social conditions and cultural factors (see figure 4).

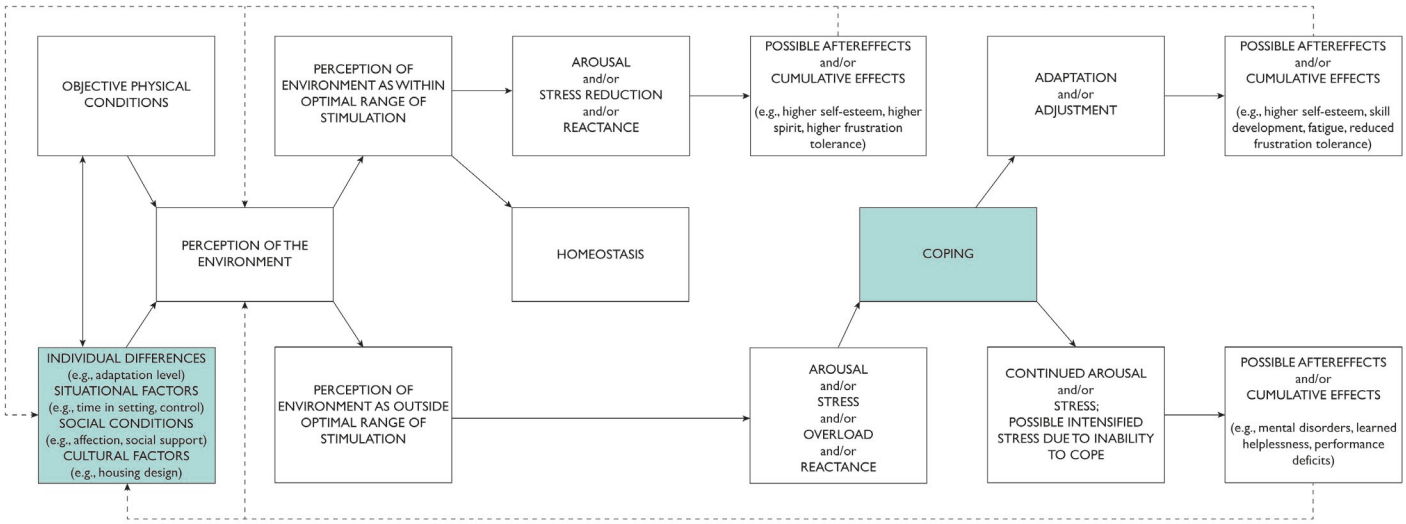

Figure 4 Eclectic model with ART and the difference from people diagnosed with autism spectrum disorder from neurotypical people adapted from Bell (Bell, 2001)

4 Design, Autism and Environment

Firstly, to design is to design for a user. When the opportunity presents itself or the opportunity can be sought to communicate with the user, it has to be done. Semi-public

buildings however, are designed for everyone. Since communicating with everyone simply cannot be done, theorising about the wants and needs of the user is the best one can do.

In respect to autism spectrum disorder and the design of the environment, the first objective is to lower arousal: the second objective is to replenish directed attention. This can be done by enlarging personal space or combatting crowding (spatial and social), enlarging perceived control, being predictable, limiting sensory input and restoring directed attention through ART. To establish this, the following themes are considered: privacy (as an aspect of social crowding), spatial crowding, illumination, general stimuli and nature.

4.1 PRIVACY

With regard to privacy and personal space, blocking the view that people have on a person decreases their impact and increases a sense of privacy, but blocking the sound has a far greater impact (Kupritz, 1998). This is especially important in semi-public spaces like the municipality and the hospital where personal information is being discussed. The perceived control over this visual and auditory privacy could also be a factor.

What that means for design is that the auditory privacy is more important than visual privacy and should be treated as such. Where visual barriers are often put in place, creating different rooms or auditory spaces for people will result in much less arousal and more comfort. This is not only due to the auditory barrier, but also to the perceived ability for the visitor to shut a door. Even when the door is left open, the perceived ability to shut it results in less arousal.

4.2 SPATIAL CROWDING

In spatial crowding, prevention is key. This could be established by heightening cognitive control through prior warning about possible crowding or placing informational signs about the amount of crowding. These interventions make the situation more predictable and can be perceived to be more controllable, as a person can adjust their actions or expectations based on the information gathered. (Langer & Saegert, 1977)

Aside from decreasing the amount of seats per square meter or enlarging the space itself, an architectural solution to spatial crowding is windows. When looking out of a window, a person suffering from crowding can psychologically escape. (Bell, 2001)

4.3 ILLUMINATION

In their 1996 article *Assessing beliefs about lighting effects on health, performance, mood, and social behavior*, Veitch and Gifford stress the importance of the predictability of lighting. They state that, especially for people who express a strong preference in lighting, it could have a large impact. What a person expects from lighting is mostly cultural. This is probably considered automatically and correctly during the design process, but this find stresses the importance of not experimenting with lighting design, especially in a semi-public space.

When speaking of illumination, windows often come to mind. Leather, Pyrgas, Beale and Lawrence however debunked the myth that more windows lead to the improvement of general well-being. In their article *Windows in the workplace: Sunlight, view, and occupational stress* they state that not the vertical area of window but the horizontal area that is lit by the

sun is in direct correspondence with the improved general well-being. When designing a semi-public space, orientation is therefore a factor to be considered.

4.4 GENERAL STIMULI

One of the main criteria for the diagnosis of autism spectrum disorder is "Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment." (American Psychiatric Association, 2013). In order to design a space without too much arousal, limiting the amount of general stimuli is desirable. This not necessarily a main design aim, but a check at certain points in the design process may be helpful. By checking the amount of stimuli like signs, colours, different shapes and sizes, the expected amount of arousal can be limited.

4.5 NATURE

As discussed in chapter 2.2.6, nature can have a very positive effect on a person. When recovering from surgery, pleasant landscape views have a positive effect on the patient who can be released sooner (Ulrich R. S., 1984). Larsen et al. state that just like views overlooking nature, indoor plants also make a space more comfortable and attractive (Larsen, Adams, Deal, Kweon, & Tyler, 1998). To take it even further, Felsten compared natural (yet mundane) views with murals with nature and found that a dramatic nature mural with a water feature was rated better at restoring attention than the natural but mundane view (Felsten, 2009).

While this research suggests that indoor plants and murals have a positive effect on people, windows and real natural views should not be undervalued. Aside from restorative views, windows let in sunlight, which improves general well-being, they create a way to psychologically escape from crowded rooms and they let in natural light, which is highly predictable nowadays. When designing, windows and their views should be highly valued but when the possibility does not arise, murals and indoor-plants form a great alternative.

5 Discussion

Firstly, this thesis is based on the idea that everyone can benefit from changes in design made in response to autism spectrum disorder. For people diagnosed with autism spectrum disorder themselves however, there are three levels of severity defined for the diagnosis as can be seen in Addendum 1 (American Psychiatric Association, 2013). Levels one and two (respectively requiring support and requiring substantial support) will probably be able to benefit from this thesis, while level three (requiring very substantial support) will probably not be able to benefit due to its severity.

Secondly, the sources used in this thesis are relatively old. This is a problem much encountered in the field of environmental design. There are however sources available that are younger which corroborate the older sources. The theories and breakthroughs however find their origin in the old sources, which is why they are the ones cited.

Lastly, because of the difference between the varying semi-public spaces, there are a number of things which can be studied further. One of them is the difference culture has on specific semi-public spaces. This could be done in respect to raising general predictability (in a

globalising world) or to aid in preventing social and/or spatial crowding. Another possible study is to put the theory of this thesis into practice.

6 Conclusion

The main question posed in this thesis is: "*What design elements could be improved with help from autism spectrum disorder to improve the experience and perception of semi-public spaces?*".

To answer this question, first the person-environment connection was researched. A combination of the senses, cognition and blindsight help a person register their environment. The way a person is affected by their environment is shown in figure 3. Firstly individual differences, situational factors, social conditions and cultural factors weigh in on whether the objective physical environment is perceived as within or outside of the optimal range of stimulation. When it is perceived as within optimal range, homeostasis can occur. ART however can also occur, replenishing the persons directed attention or creating other possible aftereffects and/or cumulative effects. When the environment is perceived as outside of the optimal range of stimulation, coping is needed. This can either work or not, which house their own possible aftereffects and/or cumulative effects.

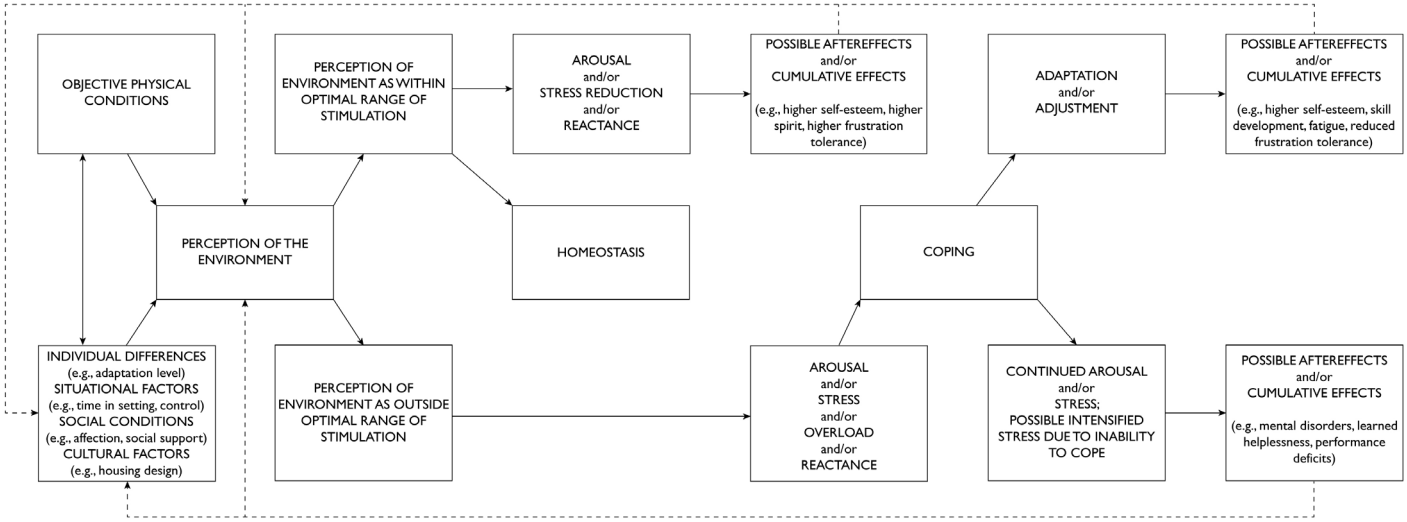

Figure 3 Eclectic model with ART adapted from Bell (Bell, 2001)

Secondly, autism spectrum disorder was researched. The criteria for autism spectrum disorder are: "Persistent deficits in social communication and social interaction" and "Restricted, repetitive patterns of behavior, interests, or activities" (American Psychiatric Association, 2013). People diagnosed with autism spectrum disorder differ from neurotypical people in the way they are affected by their environment in their individual differences, situational factors, social conditions, cultural factors and in the way they are able to cope as is illustrated in figure 4.

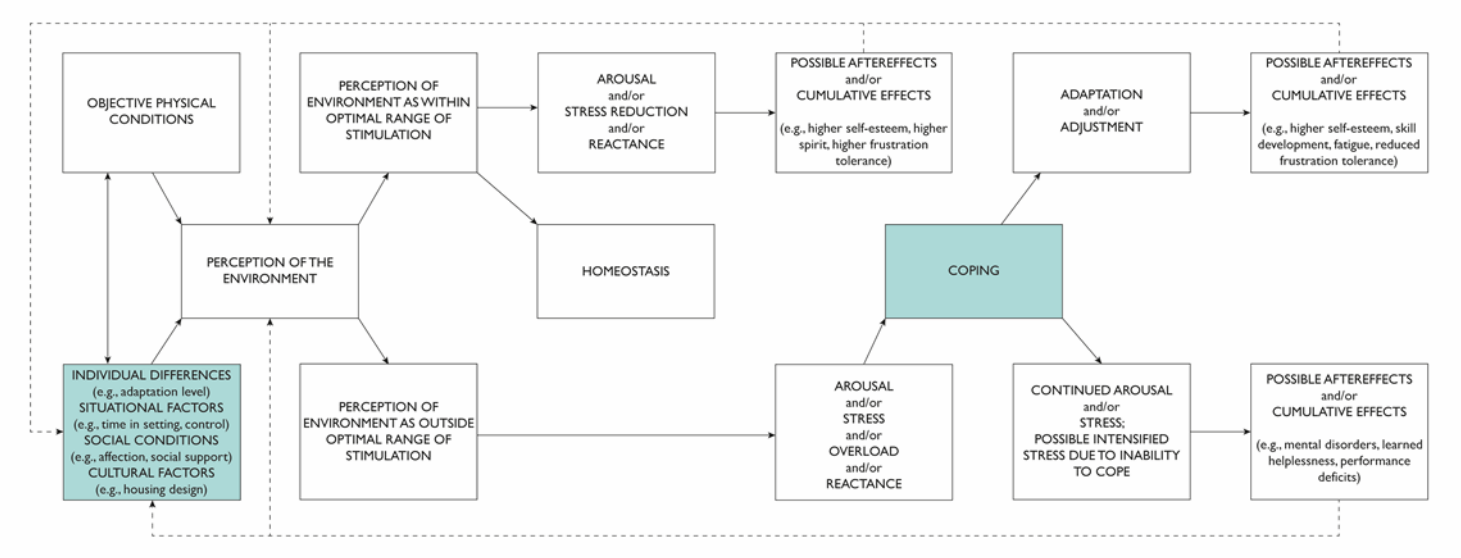

Figure 5 Eclectic model with ART and the difference from people diagnosed with autism spectrum disorder from neurotypical people adapted from Bell (Bell, 2001)

Lastly the environment and autism spectrum disorder research was combined with design. In this ever-quickening, digitised world, people are bombarded with impulses that require a persons directed attention. This leads to heightened arousal. To lower arousal with help from autism spectrum disorder, five themes were considered. Firstly privacy, where visual barriers are valued higher than auditory barriers. Auditory barriers have a far greater impact on the sense of privacy and should be valued as such. Auditory barriers combined with perceived control lead to the design element *room*.

The second theme considered was spatial crowding. Spatial crowding is best to be prevented. This can best be done by heightening cognitive control. When prevention is not an option, windows create a possibility to psychologically escape a crowded space.

Thirdly, illumination was assessed. Here, predictability is a large factor. Therefore it is advised not to deviate too far from the (cultural) norm. Furthermore, the amount of sun-lit floorspace has an impact on general well-being. It is therefore advised to keep a orientation of the windows in mind when designing.

Next, the general stimuli were considered. It can be concluded that a check during the design process is desirable where the general stimuli are assessed and when needed, altered.

Lastly, nature and ART were considered. To improve the experience and perception, not only limiting spent attention is desirable, replenishing that attention is also desirable. To do this, a view of nature (be it real through a window or fake in the form of a mural) should be highly valued.

Lowering overall arousal and replenishing directed attention when possible could improve the experience and perception all people have of semi-public spaces.

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Addendum 1

Severity levels of Autism Spectrum Disorder reprinted from DSM-V: American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (DSM-5 ed.). American Psychiatric Pub.

Severity level	**Social communication**	**Restricted, repetitive behaviors**
Level 3 "Requiring very substantial support"	Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches.	Inflexibility of behavior, extreme difficulty coping with change, or other restricted/repetitive behaviors markedly interfere with functioning in all spheres. Great distress/difficulty changing focus or action.
Level 2 "Requiring substantial support"	Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduces or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and who has markedly odd nonverbal communication.	Inflexibility of behavior, difficulty coping with change, or other restricted/repetitive behaviors appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action.
Level 1 "Requiring support"	Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful responses to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to-and-fro conversation with others fails, and whose attempts to make friends are odd and typically unsuccessful.	Inflexibility of behavior causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.