A perfect fit

creating supportive housing for the autistic



reflection report

Laura Francisca van Beek 4246462

Reflection report Graduation Explore Lab december, 2018

Delft University of Technology Master Architecture, Urbanism and Building Sciences

Design tutor:Roel van de PasResearch tutor:Luc WillekensBuilding Technology tutor:Pierre Jennen

Board of examinors:

Daan Vitner

Since I grew up with a twin sister having autism, I developed a fascination for the current (available) housing situation for this focus group. It appears that a lot of group housing is on offer, but not many individuals are looking for such a housing situation. They rather live independently with or without support. My fascination developed to the point where I became interested in designing individual apartments where the architecture can support the resident.

The relationship between the theme of Explore Lab and residential architecture for people with autism.

Although my subject focusses on residential architecture, I could not have executed my research within the Architecture & Dwellings studio, since I would not have gotten the tools to investigate this focus group (people with autism) thoroughly.

I wanted to really dive into this research and explore several research methods. Also, I wanted to choose my own location, preferably in Leiden. The studio of Explore Lab made this possible.

The research question I constructed for this thesis was as follows:

Which architectural elements can increase the well-being of people with autism within their home environment?

For my research, I focussed on sensory architecture, as well as spatial considerations to support routine and implementing elements for privacy as well as social interaction.

Relationship between the methodical line of approach of Explore Lab and the chosen methods.

The studio of Explore Lab has given me the opportunity to elaborate several research methods which enabled me to understand as fully as possible the challenges and opportunities for this project.

The methods I used to investigate this subject, were threefold. Also, my research focussed on finding problems as well as solutions to the problems. These problems and solutions can be divided under several themes I set up:

- sensory
 - x sound
 - x sight (light and colour)
 - x touch
 - x smell
- spatial
 - x layout
 - x wayfinding
 - x personalisation
 - x furnishings
- social
 - x privacy
 - x social interaction

Firstly, I did extensive literary research. Most studies done by scholars were focussed on school design instead of dwellings, so I needed to filter the found aspects on relevance for residential application.

Additionally, I visited several typological projects where I got personal tours by the location manager, or otherwise. Here, I could observe for myself how several design strategies were implemented. Also, in several projects, the residency had undergone renovations which lead to more detailed information about the behaviour of residents before and after these changes. This was also very useful for me.

Lastly, I set up questionnaires which were filled out by residents living in either a group home (waiting for an individual apartment) in Leiden, or in an individual student's home in Delft. Through these questionnaires, I could ask for the wishes of these people for a future home.

The results were combined in a set of guidelines considering the earlier mentioned themes. With this, future architects, as well of myself, might get a bit more of a grip on designing for this focus group.

Looking back, I think this approached worked quite well for me. Since I could start early with the literary study, I had already gained some knowledge about the several factors, which I then could implement in the questionnaires and

interviews. Luc Willekens, my research mentor, also thought this was the right way to go. Through meetings and his feedback, I set up a questionnaire with the possibilities for open answers. At first, I thought I should make it a questionnaire with a set choice of answers, but Luc advised me to skip that since I would not get a representative list of wishes and needs. I think this was very benificial to my research.

The relationship between research and design.

For the design of the little courtyard ('het hofje') I kept the design guidelines I set up as a result of my thesis as a reference. Through all the different scales of my design, I have taken several points in this list by heart.

On a typological level, the choice for designing a hofje resulted from the need for a tranquil environment. Since the location is in the heart of Leiden, which is beneficial for the independence of the residents, it was of big importance that the apartments offered acoustic relief.

Other implementations are design considerations throughout the building construction. By applying two seperate load bearing walls in between dwellings, the nuisance of contact noise is minimal.

Also, I have taken up several interior design decisions, to showcase how the resident can be supported throughout all the building levels. Here, sensory architecture is a big factor.

The design guidelines have also been taken into account while designing (the direction of) the transformation of the 1930's school building next to the newly built volume. By doing this, I wanted to highlight the fact that designing for this focus group, and implementing the strategies, does not have to be limited to new buildings.

These design strategies are found throughout the project, which I will highlight during the P4 presentation.

For several subjects I decided upfront that I wanted to implement them in the design, so I could take these with me in the research thesis. An example of this is the sensory garden. So the relationship between research and design worked, for me, in both ways.

The relationship considering the wider social, professional and scientific framework.

Through the experience with my sister, I understand the importance of stimulation of this focus group. If stimulation and support is insufficient, this has a great influence on their well-being and development.

Since approximately 1 in 100 people is diagnosed somewhere on the spectrum (including Asperger's Syndrome and PDD-NOS), this focus group has become a big part of contemporary society.

Therefore I think that it is not only time to take this group into account, but to maintain a certain standard in residential design. In my opinion, several design strategies can also be applied in residential design for non-autistic people.

In my opinion the firstly named themes, comfort, routine, and confidence, apply to every individual out there. The Built Environment should contribute to these pillars. Maybe not to the extent as I am doing in this research and will be applying in my design, but it should definitively be present.

Sensory architecture, for sound, light, touch, and smell, is not only beneficial to those with autism. We, as neurotypical people, can also benefit from a well-considered sensory home.

Busy traffic across your house, a train passing by every half an hour: it can be something you get used to. Only when you are at a really tranquil place, you realise how quiet the world, your world, can be. Doesn't this mean

that the noise you often hear, subconciously adds to stressful feelings? To be always aware of these sounds, somewhere in your mind, probably doesn't add to your well-being.

Additionally, we all know the feeling of not knowing where to go, searching for the right office where you have a meeting. And we all know the frustration of not being able to find a certain place.

We as designers, architectural as well as urban, should look more into this. And even though current technology such as Google Maps can help guide us through it, it will not completely erase these feelings of discomfort and uncertainty.

When form overrules function, is that worth the trouble people will experience by using the designed entity?