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Chicago; Friends of Fulbright India Grant-2008, Lewisburg; Universal Design Award for Working professional-2011 by NEPEDP-MPhasiS, India and R&D projects from All India Council of Technical Education and University Grants Commission in India. She works closely with the United Nations and consults internationally on disability issues and public access. She has lectured extensively on Inclusive Design all over the world and has many papers in various National and International journals and conferences to her credit. Her papers appeared in the publications like Taylor and Francis, Sage, HFES, EDRA, RESNA and Archnet MIT. Her book 'Designing Inclusive Educational Spaces for Autism' published by the Institute of Human Centered Design, Boston, USA was released in 2010 at 'Build Boston', the book received 'Certificate of Merit' in ArchiDesign Award-2010. She has also edited special issues of internationally refereed journals called 'SPANDREL'on 'Social sustenance' in 2012 and 'ABACUS' on 'Architecture for All' in 2007. Some major events organized by her are 'Universal Design Workshop(2011,2012,2014,2017,2019)' and National Student Design Competition on 'Universal Design/Design for All, with the National Institute of Orthropaedically Handicapped, Kolkata, Archaeological Survey of India, Ministry of Social Justice & Empowerment and UNESCO. She is one of the authors of Universal Design India Principles developed at the National Institute of Design, Ahmedabad in 2011. She serves as reviewer in many publications like EDRA, HFES, The Design Journal, and was also a jury member of Berkeley Prize Essay Competition-2013, endorsed by UC Berkeley, USA. Rachna is well known as an activist and is a founder member of three NGOs called 'M

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THROUGH THEIR OWN WORDS:A GLIMPSE INTO THE ROLE OF DESIGN IN LIVES OF PERSONS WITH AUTISM

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1.0 Abstract

User-centered design research is an approach which actively involves users for the development of more effective, efficient and safe designs. It is extremely relevant for vulnerable populations which are otherwise excluded in the design decisions. This approach gives insight into the users' needs, wants and aspirations, and encourage designers to design with them. The current paper has used an innovative user centered approach to learn from autobiographies of persons with autism. This is a minimally intrusive approach respecting the social and communication deficit of persons with autism. The paper would present the learnings from users' accounts by systematically enlisting their experiences followed by its manifestation in the built environment. The paper finally concludes with a summary on needs and concerns of persons with autism in the built environment.

2.0 Aim and Objectives

The aim of this research is to understand the needs of persons with autism and establish concerns in the built environment through their own experiences. The objectives are:

- ***To identify the persons with autism who have expressed their experiences either verbally or in writing.***

- ***To identify the literature and other online resources where their experiences are available for review.***
- ***To consolidate their experience and establish its connection with the design of the built environment.***
- ***To reconfirm the connection with the existing literature on design and autism, and also with the other users' experiences.***

3.0 Methodology

The research has explored the experiences of persons with autism through secondary sources like autobiographies, videos and articles authored by persons with autism. To start with, the author has identified the persons with autism who shared their experiences in literature and then analyzed their experiences to understand its connection with the design of the built environment. The research also connected with the other researches related with autism and design which helped in summarizing and concluding however, the current paper focuses only on learning from autobiographies.

4.0 Understanding Experiences: Through Their Own Words

The clinical approach in understanding autism represents a restricted understanding of the daily lives of persons with autism and therefore is inadequate to inform their design requirements. It treats autism as a disorder having a set of core signs and symptoms rather than a way of being. This outlook fails to inform about their everyday experiences and encounters. Whereas user centric approach in design respects the autism as a condition and collaboratively explore the ways in which design can support their way of life. In this section, various excerpts from the accounts of persons with autism are categorized in fourteen identified themes relating to their interaction with the built environment.

4.1 Patterns of processing

a.Associative Thinking

"An autistic child will often use a word in an inappropriate manner. Sometimes these uses have a logical associative meaning and other times they don't. For example, an autistic child might say the word "dog" is associated with going outside. In my own case, I can remember *both logical and illogical use of inappropriate words" (Grandin, 2006)*

"French toast" may mean happy if the child was happy while eating it. When the child visualizes a piece of French toast, he becomes happy. A visual image or word becomes associated with an experience." (Grandin, 2006)

"Ted's thought processes aren't logical, they are associational. This explains Ted's statement " I'm not afraid of planes. That's why they fly so high". In his mind, planes fly high because he is not afraid of them; he combines two pieces of information, that planes fly high and that he is not afraid of heights." (Hart, 1991)

Inferences:

- ***From the above excerpts, it is inferred that one of the ways persons with autism think is via making associations. For them, all the things have a very literal connection, completely missing the logic.***
- ***It can also be understood that for Ted, the idea of a 'plane' was associated with the idea of 'height' and not with transportation as both of them have the similarities of being high.***
- ***This indicates the literal-associational way of reasoning and not deducing the logical-associational meaning of it.***
- ***Temple emphasizes the associational nature of experiences with words, objects, people, or anything that is a part of the***

experience. The elements of an experience when seen separately might mean different things in isolation but it could become difficult for a person with autism to separate them. This can be clearly understood from the relation of the dog with the act of going out that she has described in the above excerpt. formation of visual images in the mind of an individual with autism. These associations are sometimes logical and sometimes illogical.

b.Visual Thinking

"For when he heard or read a word, it was at once converted into a visual image corresponding with the object the word signified for him." (Luria,1968)

"Growing up, I learned to convert abstract ideas into pictures as a way to understand them. I visualized concepts such as peace or honesty with symbolic images. I thought of peace as a dove, an Indian peace pipe, or TV or newsreel footage of the signing a peace agreement. Honesty was represented by an image of placing one's hand on the bible in court." (Grandin, 2006)

"You may be looking at the exact same things as us, but how we perceive them appears to be different. When you see an object, it seems that you see it as an entire thing first, and only afterwards do its details follow on. But for people with autism, the details jump straight out at us first of all, and then only gradually, detail by detail, does the whole image sort of float up into focus." (Higashida, 2016)

Inferences:

- ***Visual thinking is translation of words into images. These translations in some cases can be very realistic and, in some cases, have a symbolic and very personal meaning attached to it.***

- ***NaaokiHigashida explains in the above excerpt that there can be two ways of perceiving an object. Either from whole to part or part to whole. He regards persons with autism to have a part to whole approach resulting in delayed processing. This can mean that when they see an object, for example, an orange, they might not recognize it instantly by just looking at it once. First its color will come into their notice and then perhaps shape or texture and only then will they be able to identify it as an orange.***

4.2 Incomprehensibility of Society and People

"My consolation, my safe retreat in the world, was a brown armchair in one corner. I could just fit in behind it. With my face close to the back of it, I would stare into the upholstery so that I could see every tiny little bit of it. I became absorbed in the brown material, in its threads, in the minute holes between the threads." (Gerland, 1996)

"There was no energy to be found there, but there was rest, a way of keeping my mouth shut and holding on to a little of the energy that had otherwise been spent in trying to understand what was incomprehensible, how everything hung together." (Gerland, 1996)

"People were never safety points to me""I didn't want to move house, most certainly not. Our house and garden were my security. The house was closer to me than people were." (Gerland, 1996)

"When I'm not concentrating on people, they just look like shapes, like furniture and trees are shapes." (Rand, 1997)

"The world inside my head is quiet and peaceful and there are no people inside and nothing hard to figure out. So, it is a safe place when the real world gets too confusing." (Rand, 1997)

"Machines were never mean to me. They challenged me when I tried to figure them out. They never tricked me, and they never hurt my

feelings. I was in charge of the machines. I liked that. I felt safe around them. I also felt safe around animals, most of the time." "Even at five, I was beginning to understand the world of things better than the world of people." (Robison, 2009)

Inferences:

- ***Physical entities (objects and built spaces) play a very crucial part in the lives of people with autism as:***
- ***They give them a sense of security and certainty. Like something tangible, something to hold on to or orient oneself when lost.***
- ***They are devoid of complex emotions and hence it is easier to comprehend things rather than people.***
- ***One can have full control over objects and with people it's rather opposite. This highlights the need of having some control over the environment that they are a part of.***

4.3 Problems in Social Communication

a. Interaction

"The worst of it was, my teachers and most other people saw my behavior as bad when I was actually trying to be kind." (Robison, 2009)

"I'd watch my parents talking to grown-ups and I figured I could talk to Chuckie. But I had overlooked one key thing: Successful conversation requires a give and take between both people. Being Aspergian, I missed that. Totally. I never interacted with Chuckie again. I never interacted with any of the kids." (Robison, 2009)

"I walked with a mechanical robotic gait, I moved clumsily. My facial expressions were rigid, and I seldom smiled. Often, I failed to respond to other people at all. I acted as if they weren't even there.

Most of the time, I stayed alone, in my own little world, apart from peers." (Robison, 2009)

b. Interpretation

"It never occurred to me that Chuckie might not respond to petting the same way a dog would. The difference between a small person and a medium sized dog was not really clear to me." (Robison, 2009)

"I had severe receptive language processing problems into late childhood, but from around the age of nine I began to grasp that people were speaking with meaning. The interpretive world progressively opened up for me, but it was sluggish and slow and shut down quickly, as if that part of my brain had batteries which quickly went flat." (Williams, 2015)

"I sometimes get so tired–you have such complicated rules in your world! And all the time I have to think and think and think about them" (Gerland, 1996)

c. Response

"I figured out how to talk to other children. I suddenly realized that when a kid said, "look at my Tonka truck," he expected an answer that made sense in the context of what he had said." "The other kid's words did not change the course of my thoughts. It was almost like I didn't hear him. But on some level,I did hear, because I responded. Even though the response didn't make any sense to the person speaking to me." (Robison, 2009)

"When I'm talking in a weird voice, I'm not doing it on purpose. Sure, there are some times when I find the sound of my own voice comforting, when I'll use familiar words or easy-to-say phrases. But the voice I can't control is different. This one blurts out, not because I want it to: it's more like a reflex." (Higashida, 2016)

"Besty said, "Did you hear about Eleanor Parker's son? Last Saturday he got hit by a train and killed. He was playing on the tracks." I smiled to her words, she turned to me with a shocked expression on her face. "What! Do you think that's funny?"

"Here is what went through my mind:Someone got killed. Damn! I am glad I didn't get killed. I am glad Varmint or my parents didn't get killed. I am glad all my friends are okay. He must have been a pretty dumb kid, playing on the train tracks, I would never get over by a train like that. I'm glad I'm okay. At the end, I smiled with relief." (Robison, 2009)

Inferences:

- ***From analyzing the above text, it is very clear that the larger part of having communication problems lies in 'interpretation' of the message received.***
- ***Persons with autism are regarded as having impaired communication and interaction skills. One of the reasons understood for it could be that verbal language and the meanings attached to it makes no or different sense than how typically they might mean. This results in different interpretations of the message received resulting in varied or no response. In addition, a verbal way of communicating might not be the best way to communicate with some persons with autism.***

4.4 Non-Verbal Communication

"Without the use of gestural signing, my brain seems to struggle to keep up with putting any concepts to words and I seem unable to hold them consciously. Even when I do understand them, after three seconds the meaning of what I've heard is mostly jumbled and large chunks of it seem to have fallen away." (Williams, 2005)

"Our expressions only seem limited because you think differently from us. It's troubled me for quite a while that I can't laugh along when everyone else is laughing. For a person with autism, the idea of what's fun or funny doesn't match yours, I guess." [...] At other times, if we're surprised, or feel tense, or embarrassed, we just freeze up and become unable to show any emotion whatsoever" (Higashida, 2016)

Inferences:

- ***Understanding Nonverbal communication like hand gestures, body language, etc. becomes very difficult for individuals with autism as hand gestures become too distracting for them to focus on the spoken words.***
- ***On the contrary, for some of them, hand gestures become crucial as it helps them associate with the verbal language used and becomes a pivotal point to concentrate or focus on, as described by Donna Williams above.***

4.5 Repetitive Behavior and Mannerism

"It's true; I always ask the same questions. 'What day is it today?' or 'Is it a school day tomorrow?' 'Because I very quickly forget what it is I've just heard. So, I do understand things, but my way of remembering them works differently from everyone else's. I imagine a normal person's memory is arranged continuously, like a line. My memory, however, is more like a pool of dots. I'm always 'picking up' these dots – by asking my questions –So I can arrive back at the memory that the dots represent."(Higashida, 2016)

"My body's always moving about. I just can't stay still. I'm always on the lookout for an exit. Everyone tells people with autism, 'Calm down, stop fidgeting, stay still,' when we're busy moving around.

But because I feel so much more relaxed when I am moving," (Higashida, 2016)

"For a long time, I've noticed that people with autism often repeat questions, like parrots. Firing the question back is a way of sifting through our memories to pick up clues about what the questioner is asking. We understand the question okay, but we can't answer it until we fish out the right 'memory picture' in our head." (Higashida, 2016)

Inferences:

- ***Repeating the same words or phrases can have multiple reasons and might not always be an act that needs alleviation. For some people, the words or actions that they repeat are the only things they understand and can relate to. This sense of familiarity and comfort that repetition provides might actually be a means to alleviate other invisible distress.***
- ***Some persons with autism have memory issues which might deviate them from the ongoing. Repetition as an act can also be seen as a way to align themselves, provide orientation and regain perspective to the current.***
- ***Repetitive behaviors are more like coping mechanisms to an underlying discomfort and less like acts that need to put a stop to. Behaviors such as rocking back and forth, hand flipping, etc. are done to decrease the built-up anxiety and tension. The more extreme the movement, the greater the feeling they try to combat.***
- ***Hence, it is very evident from the above text that showing repetitive behavior is not a dysfunction but is a way for them to relax, calm down and regulate themselves.***

4.6 Sense of Order

"I would use my mother's kitchen spoon to scoop out a ditch. Then I would carefully lay out a line of blue blocks. I never mixed my food, and I never mixed my blocks. Blue blocks went with blue blocks, and red blocks with red ones." (Robison, 2009)

"I desperately wanted to understand, and this led me to theories: if everything looked in a certain way in the living-room- the sun shining in through the curtains, the ashtray on the table with a newspaper beside it- and if Kerstin then came back from school…I thought that everything had to look exactly the same the next day, for her to come back from the school. And in fact, it often was." (Gerland, 1996)

"I also often don't recognize objects when they are not in their expected place, and I can take up to two seconds to recognize the nature of an object. Unless it moves, unless I can experience it, it often doesn't mean anything at first, sometimes it doesn't mean anything for quite some time." (Williams, 2015)

Inferences:

- **From the above excerpts, the need for order in the day to day can be clearly observed. This is also very closely related to spatial sequencing and organization in a built space.**
- **As understood from the book, Look me in the eye, John Edler thought that there can only be one way of playing with his tonka truck and there can be only one way to arrange his blocks. Similarly, as stated by GunillaGerland above, for her the idea of the living room had more to do with the image of how she perceived the sun, curtains, ashtray in the same sequence, same position, every day and everything had to look the same even the next day. Donna Williams also stated that it was**

difficult to recognize the same object if they were displaced from their position.

- **This observation leads to an explanation that the idea of any place or object is formed by 'mentally grouping' the objects once observed into different bags in a particular order in the mind. This helps in memory retention and easy comprehension. For example, the idea of a classroom for a lot of students can be formed based on the sequence that they follow after entering the class and the number of people, chairs, objects, etc., that they see every day. Any new addition or removal can disturb them as they can feel lost and confused.**

4.7 Sense of Boundary

"Except for your senses, you have other means at your disposal to know who you are, and to define the boundaries between yourself and what is around you." "At a certain moment, the interface of the chair is as warm as my body temperature, and at that moment I have lost the boundary between me and that chair."(Landschip& Modderman, 2004)

"People with autism sometimes have body boundary problems. They are unable to judge by feel where their body ends and the chair they are sitting on or the object they are holding begins, much like what happens when a person loses a limb but still experiences the feeling of the limb being there." (Grandin, 2006)

"Time is a continuous thing with no clear boundaries, which is why it's so confusing for people with autism." "The hands of a clock may show that some time has passed, but the fact we can't actually feel it makes us nervous." (Higashida, 2016)

Inferences:

- ***Having a sense of boundary creates a distinction between two separate entities. Without these boundaries, things become unclear and confusing. Landschip describes how he perceives the surrounding space by means of his body, and uses the perception of the boundaries of his body as a reference. In this context, he describes his fear of remaining seated on a chair for too long. It ends up blurring the difference between the chair and his body.***
- ***This need can be addressed in design by providing a clear distinction between different spaces by compartmentalizing them***.

4.8 Sense of Certainty and Safety

"That bicycle is literally and metaphorically something to hold on to, an anchor, a point of departure that makes me know, all the time, what is upside and what is downside of reality" (Landschip& Modderman, 2004)

"The din made the ground under my feet disappear and I could neither see nor feel the world around me. Up and down were suddenly in the same place and I had no sense of where my feet were." " I had to feel something that stood still, something anchored, in a world that had suddenly become totally unpredictable." (Gerland, 1996)

Inferences:

- ***As explained by GunillaGerland in the above text, she lost the sense of ground; up and down suddenly became the same for her which resulted in complete uncertainty.***
- ***It is constantly being observed that persons with autism need pivot points in their surroundings to anchor themselves. They usually find it in tangible and fixed entities.***

- ***They have difficulty locating themselves in relation to their surroundings. This explains why they have difficulties finding their way in a space and can get lost easily.***
- ***For them, the distinction between separate entities is very crucial to establish. This will aid them in having a sense of direction and orientation.***
- ***This understanding can be used while designing where there can be a stark distinction between the vertical elements in the space to the horizontal ones. For example: walls and flooring can have different color finishes to create a visual distinction***.

4.9 Fear of Change: Transitions

"The really big challenge for me was making the transition from high school to college. People with autism have tremendous difficulty with change. In order to deal with a major change such as leaving high school, I needed a way to rehearse it, acting out each phase in my life by walking through an actual door, window, or gate. " (Grandin, 2006)

"I just cannot take it when a fixed arrangement doesn't proceed as per the visual schedule. I understand that changes can't always be avoided, but my brain shouts back, No way, that's not acceptable." (Higashida, 2016)

Inferences:

- ***Difficulty in transition is interconnected change. Change from one space to another or one activity to another could be facilitated by providing suitable transitions.***
- ***Temple, in the above texts tries to explain the challenges she faced while transitioning from one phase to another in her life. She had to rehearse the entire scene or sequence multiple times in her head in order to make her prepare for the***

upcoming change. She used to pass through actual doors to prepare herself as the door symbolized the entry into a new phase.

- ***Hence, it can be concluded that one of the possible solutions to transition is to provide time to prepare for change and use of symbolic elements which symbolizes the idea of change.***

4.10 Cues and Prompts

"Written words were too abstract for me to remember." "It is much easier for me to understand written text that describes something that can be easily translated into pictures." (Grandin, 2006)

"Autistic have problems in learning things that cannot be thought about in pictures. The easiest words for an autistic child to learn are nouns, because they directly relate to pictures." (Grandin, 2006)

"Lower functioning children often learn better by association, with the aid of word labels attached to objects in their environment. Some very impaired children learn more easily if words are spelled out with plastic letters they can feel." (Grandin, 2006)

"People with autism are sometimes unable to move on to their next action without a verbal prompt. For example, even after we ask for a glass of juice and are given it, we won't actually start drinking until someone's said, 'Enjoy' or 'Go ahead and drink" "Doing the action without the cue can be really, really tough. In the same way as you don't walk over the crossing until the light turns green, I can't 'switch on' the next action until my brain receives the right prompt." (Higashida, 2016)

Inferences:

- ***Cues and prompts can be seen as crucial elements to everyday functioning. Cues or signages in specifics need to be visual rather than written as most of the persons with autism have a***

visual way of thinking and can associate to something easily with the aid of pictures. This can be used as a tool for wayfinding in built spaces.

4.11 Orientation and Wayfinding

"We don't really know where we ought to be. You could tell us that we ought to follow someone else, or hold their hand, but the fact is that, with or without your suggestion, we're still going to lose our way." "we wander off – or run away – in search of some location where we do feel at ease. Then eventually we get lost, and have to be escorted back to the place we were at, or the person we were with, before." (Higashida, 2016)

"There must be a sign of some sort on the doors, because the others didn't hesitate over where they should go." (Higashida, 2016)

Inferences:

- **A recurring problem concerns orientation and wayfinding. Several autobiographers describe situations in which they lose their spatial orientation in outside environments as well as inside a building.**
- **NaaokiHigashida mentions the need to always follow someone to find their way and emphasis on the search of 'safe place' which makes them run away and eventually get lost.**
- **GunillaGerland faces problems in dealing with the environment, but especially the realization of a different use or interpretation of the environment compared to others, makes her question which innate abilities enable the others to retrieve this logic.**

4.12 Affinity towards Curve

"It's because my nervous system is rectilinear that I need to acquire a curve from outside. As if, when I really need an inner curve so as

not to be so rigid, I have to find it somewhere outside myself." (Gerland, 1996)

Inference:

- ***Gerland longs to relate the environment to her own senses. Furthermore, she explains her bent towards curved objects, her desire to touch them, triggered by the feeling of being so 'straight' inside.***

4.13 Distraction

"To this day, when I speak, I find visual input to be distracting. When I was younger, if I saw something interesting, I might begin to watch it and stop speaking entirely." (Higashida, 2016)

"That's why I usually look somewhere neutral - at the ground or off into the distance-when I'm talking to someone. Because speaking while watching things has always been difficult for me." (Higashida, 2016)

Inferences:

- ***Not making eye contact while speaking is a distinctive feature of autism. One of the reasons could be due to distracting/ overpowering visual input.***
- ***Inability to distinguish between background and foreground information results in confusion, due to which individuals with autism are unable to bifurcate between inputs that are important and the inputs which need to be kept as a part of the background.***

4.14 Sound and Light

"There are certain noises you don't notice, but that really get to us. The problem here is that you don't understand how these noises affect us."

"At times like these, it feels as if the ground is shaking and the landscape around us starts coming to get us, and it's absolutely terrifying. So, cupping our ears is a measure we take to protect ourselves, and get back our grip on where we are." (Higashida, 2016)

"Flapping our fingers and hands in front of our faces allows the light to enter our eyes in a pleasant, filtered fashion. Light that reaches us like this feels soft and gentle, like moonlight. But 'unfiltered' direct light sort of 'needles' its way into the eyeballs of people with autism in sharp straight lines, so we see too many points of light. This actually makes our eyes hurt." (Higashida, 2016)

Inferences:

- ***The above excerpts highlight how the elements of the built space can become a means of distress. Sensory stimulations caused by these elements can result in behaviors that might be seen as 'not normal'.***
- ***NaaokiHigashida explains that persons with autism can notice auditory inputs that we can't and noises can affect them badly. He feels terrified and as a reaction he cups his ears with his palm as a coping mechanism.***
- ***Need for soft, indirect light has been expressed by NaaokiHigashida. He states that direct light for him feels like a needle into the eye balls.***

5.0 Conclusion

It is evident from the way authors described their experiences in day-to-day life that the way they perceive the world and process or interpret information from the environment is unique and very different from us. There is a need to understand the underlying cause behind the responses that are seen and work towards making

the environmental conditions appropriate rather than changing the responses.

This analysis reflected that the built environment serves as a point of anchor, something tangible and fixed which comforts persons with autism by providing a sense of safety, certainty and security. But despite the certainty offered by the fixed physical space, the conceived organization and assumed logic behind the tangible space causes distraction, confusion and makes them lose their sense of direction altogether in a space. This makes the environment threatening and illogical for them.

5.1 Needs of Persons with Autism in the Built Environment

5.1.1. Need for Order

Need to follow an order or having a set sequence in things that persons with autism encounter is essential to their ability to comprehend. This is also because of 'mentally grouping' the objects once observed into different bags in a particular order in the mind. Once the order is set in the mind, the information can then be used again and again for comprehension.

5.1.2. Need for Cues and prompts

People with autism are sometimes unable to move on to their next action without receiving a prompt or cue from the environment. This cue helps them know where they are in a space, what they are expected to do and guide them for how they can move forward.

5.1.3. Need for spaces to sensitize and desensitize

As identified, there are 2 kinds of sensitivity persons with autism have. They are hypersensitive to some stimuli and hypo sensitive to some. In the former, they seek spaces that calm and relax and in latter they look for spaces that provide stimulations. So, there should be a provision for both.

5.1.4. Need for having a sense of boundary

Having a sense of boundary creates distinction between two separate entities. Without these boundaries things become unclear and confusing.

5.2 Major Concerns of Persons with Autism Related to Built Environment

5.2.1. Perception

Perception is nothing but arrangement of various sensations together, in a manner that could be organized in patterns that could be understood together, resulting in cognition of information. Stimulation Theories are being used to understand the different ways of perception and cognition by persons with autism. It regards the physical environment as a source of sensory information which is received by our senses to hear, see, taste, smell, balance and orient ourselves boundaries in the information received

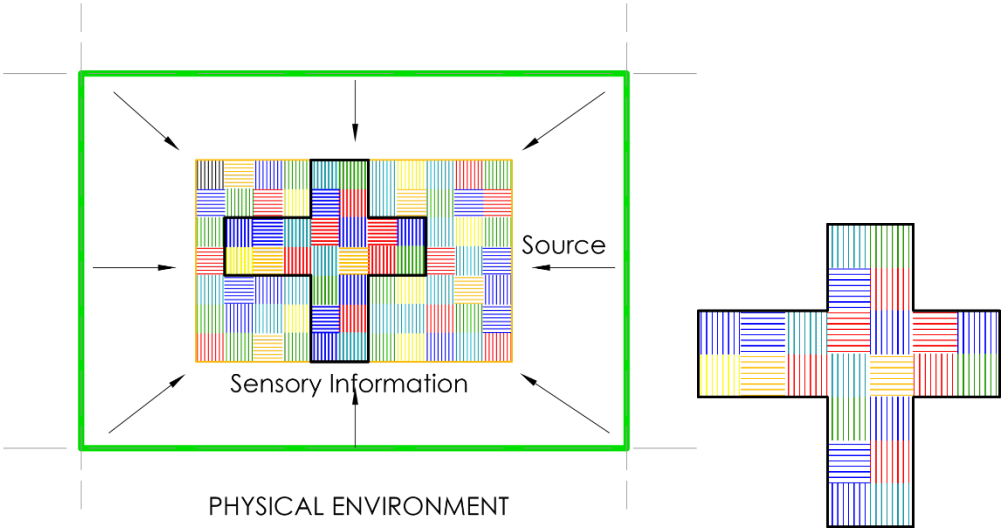

Figure 1: Information to be perceived, perception of sensory information

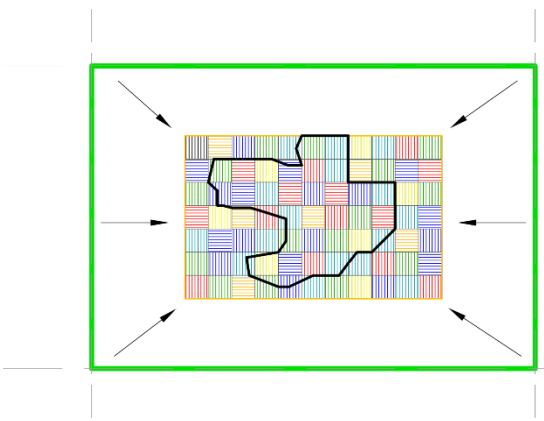

Figure 2: Confusion understanding the boundaries in the information received

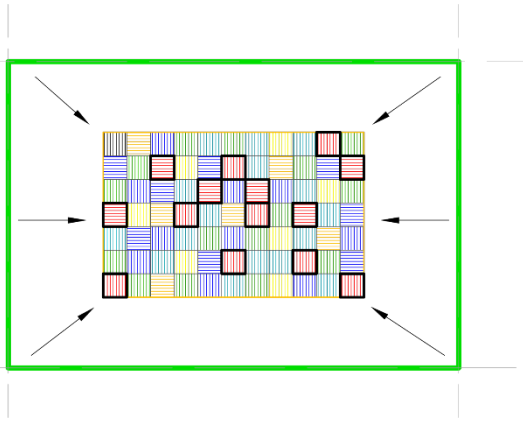

Figure 3: One stimulus overpowers

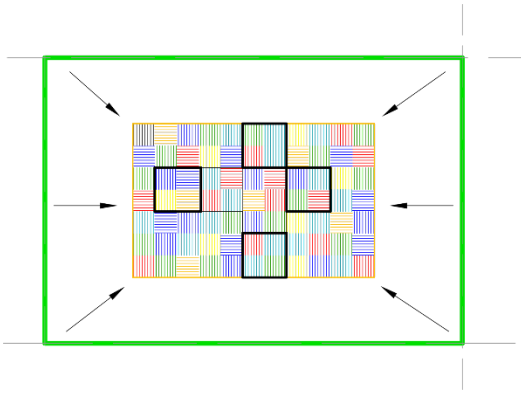

Figure 4: Delayed processing, receives

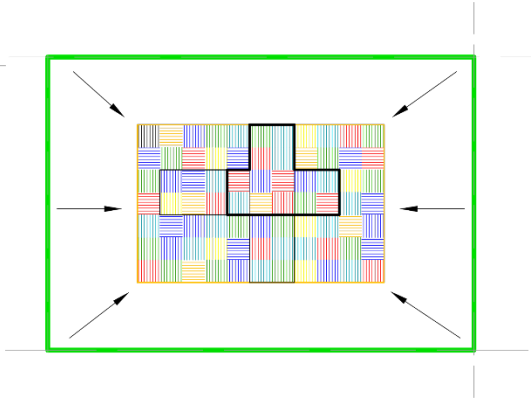

Figure 5: Reception of half information in parts

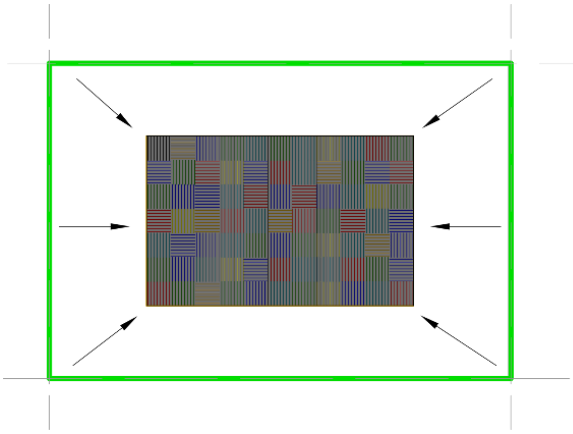

Figure 6: No information received, sensory shutdown

5.2.2. Distraction

Environment becomes a constant source of distraction and it becomes difficult to focus or pay attention to one particular person or thing.

5.2.3. Wayfinding

A recurring problem concerns orientation and wayfinding. They have difficulty locating themselves in relation to their surroundings. This explains why they have difficulties finding their way in space and can get lost easily. Several auto biographers describe situations in which they lose their spatial orientation, in outside environments as well as inside a building.

5.2.4. Transition

The whole idea of change is very difficult to grasp. Entering from one space to another having different spatial configuration and arrangement scares them as comprehending two different kinds of environments becomes difficult for them.

5.2.5. Sensory overload

The brains of individuals are not able to filter out irrelevant information such as background noise, patterns on walls, the feeling of clothing or people moving. This leads to too much processing by the brain at once and creates overload.

5.2.6. Unable to distinguish between background and foreground information

It's difficult for persons with autism to 'break' the whole picture into meaningful parts and focus on the information immediately in front of them. This distorts their understanding of what is in front of them and what is behind affecting focus and attention.

5.2.7. Distorted depth perception

A lot of auto-biographies talk about trouble with understanding boundaries and relationships between objects in space and their own bodies. This problem happens due to distorted depth perception which leads to distortions of shape, size and movement.

6.0 Acknowledgement

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