Universal Architecture in the designer's eye – accessibility, usability, Universal design and the UN CRPD seminar course

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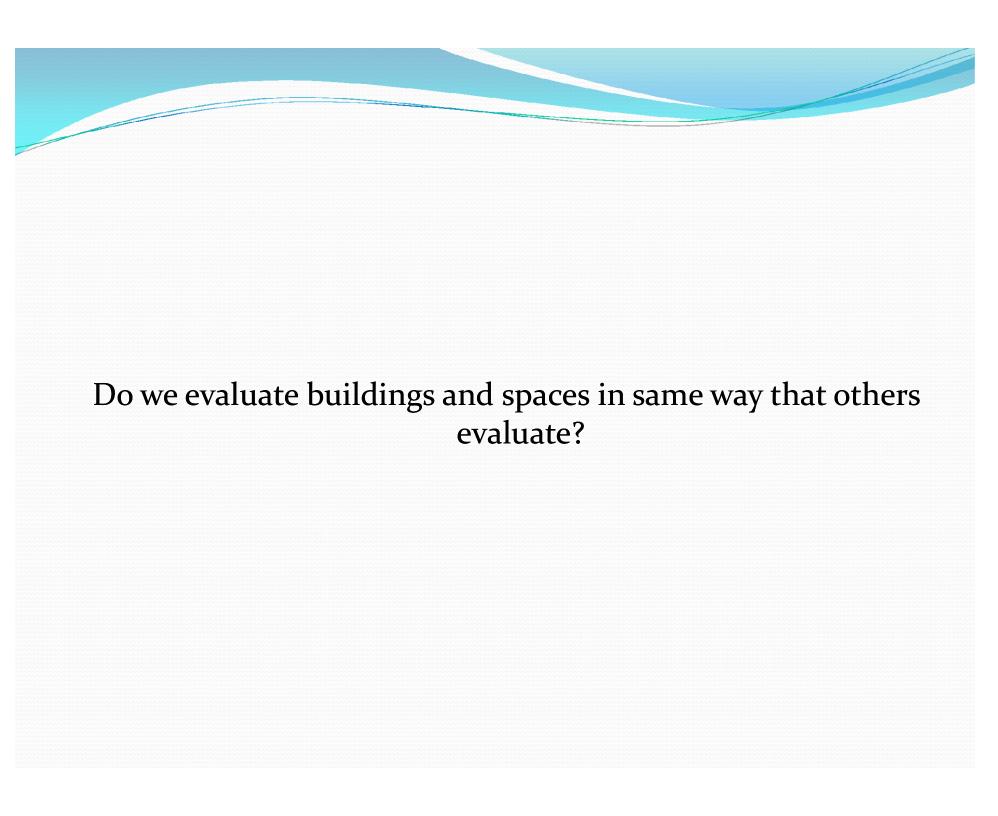
KTH university
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Stages of perceptions

Architect as designer and creator of space should consider users and their demands.

But

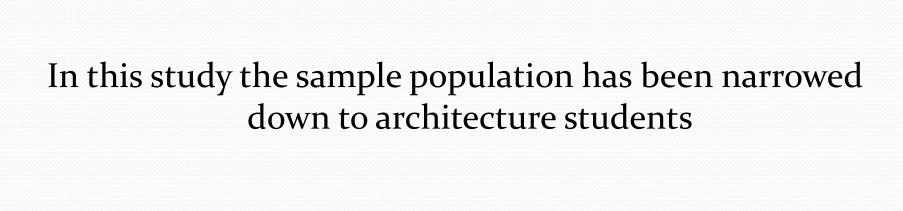
how can they know theses demands? How can they know users' perception about buildings?



"people react to their environment by using meaningful words in their description" [Amos Rapoport, 1990]

This project started by thinking about architects' perception and lay people's perception(users)about buildings. And if they think in same way or not. this idea created a more specific question about different perceptions:

Do architects describe and evaluate buildings in same way?



Östra station & KTH library have been evaluated by sample population

- the assessment protocol was used as questionnaire and research structure. Architect student visited two buildings and fill this questionnaire.
- This questionnaire has different points for assessment. In this project the overall assessments and quick sketches of this questionnaire were analyzed.

Name :	Male	Fema	le 🔲	Age:	Object t	to assess.:	
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.00			

- •Do you have any special characteristics that make you different to any other assessor of architectural space (like body height, glasses, or any other type of special ability):
- •At the moment of the assessment, do you have any particular sensory problems like a wounded limb, heavy luggage, headache or similar?
- •Draw a quick sketch of the architectural space you just have left, what is your mental image of the particular space? :

Criteria			Grade			Main assessment point
	1	2	3	4	5	
the performative ability/ functionality						
visual capacity						
acoustic capacity						
locomotive capacity						
thermal capacity						
olfactory capacity						
overall assessment						

Table 1: Overview of questionnaire

Respondents	Gender	Age	special characteristics /sensory problems
Number 1	Female	37	Glasses
Number 2	Male	25	Glasses
Number 3	Male	29	Glasses, over average height
Number 4	Female	24	Glasses
Number 5	Male	38	Tall, 189 cm, Easily disturbed by sound
Number 6	Female	24	Contact lenses

Table 2: Overview Respondents

#### NUMBER 1

Female 37 Glasses

#### Östra station

- •Hard to find the station
- •Feel dependent of other people
- •Feeling of being on the way while standing for thinking and finding elevator
- •Lack of vitual qualities.

More about finding and understanding of area 3D

Score:2

#### **KTH library**

- •The qualities are overwhelming (daylight, high of ceiling, materials)
- •Functioning with regard to the amount of people using the the plase.
- •Critic about the details according to disabilities.

More about vitual capacity

3D

#### NUMBER 2

Male 25

Glasses

#### Östra station

- •The area lacks proper lighting
- •Being cold
- •It is not good place for pleasant stay
- •It is ok for being passenger.

More specific

3D

Score:2

#### **KTH library**

- •The space is appropriate to its function
- •People seem to understand how to behave in the architectural context with no hassle. General descriptions

3D

NUMBER 3 Male 29 Glasses, over average height

#### Östra station

- •Noisy, dark and ugly
- •Highly functional for the strictly delimited purpose

About the area quality and its function 3D

Score:2

#### **KTH library**

- •Place seems to be on purpose
- •Exhorting to get to know

General descriptions of quality of area 3D&2D

#### **NUMBER 4**

Female 24 Glasses

#### Östra station

- •Pretty bad architecture not the best for disable person.
- Disorienting place
- •loud and fast pace
- Dark and shabby looking
- •The flooring is pretty impactful

General description to specific quality

3D

Score:2

#### **KTH library**

- Pretty great house
- •Well adapted for people with disabilities
- Much better with ramps that have rails on both sides, clearer direction
- •No big problem
- •Helping people orient themselves around

General descriptions to specific suggestion and general again

3D

NUMBER 5 Male 38 Tall, 189 cm, Easily disturbed by sound

#### Östra station

- Main function is basically to be a corridor to the railway
- •The building shows a mismatch of different functions from different times

General critic about design and function Score:2

#### **KTH library**

- Feeling welcomed on entrance
- •Moving straight from the entrance to the main hall
- Main hall creates a feeling of a light roof and free, open space
- •The flow of the movements is distributed well
- •Library is inviting with is semi-transparent walls and fresh interior

More describing of atmosphere Score:4

NUMBER 6 Female 24 Contact lenses

#### Östra station

- •Functionally it works
- Bad virtual effects
- •Not suitable for person with sight problem
- •Unpleasant sound, smell and thermal qualities.
- Not good lighting kind of gloomy

About function and specific qualities of space 3D

Score:2

#### **KTH library**

- Good for person without disability
- •From disable person perspective there are some flows (with impaired mobility capacity)
- Levels and surrounding space are not indicated well
- •Not many sign to describe the spaces.

Considering disable person and lacking of proper signs

3D

Score: between 3&4

Respondents	sketch 2D/3D	Overview grade	Main aspect of description
NUMBER 1	3D	Score:2	More about finding and understanding of area
NUMBER 2	3D	Score:2	More specific qualities
NUMBER 3	3D	Score:2	About the area quality and its function
NUMBER 4	3D	Score:2	General description to specific quality
NUMBER 5	_	Score:2	General critic about design and function
NUMBER 6	3D	Score:2	About function and specific qualities of space

Table 3:Östra station assesments

Respondents	sketch 2D/3D	Overview grade	Main aspect of description
NUMBER 1	3D	Score: 5	More about vitual capacity
NUMBER 2	3D	Score:4	General descriptions
NUMBER 3	3D& 2D	Score:4	General descriptions of quality of area
NUMBER 4	3D	Score:4	General descriptions to specific suggestion and general again
NUMBER 5	-	Score:4	More describing of atmosphere
NUMBER 6	3D	Score: between 3&4	Considering disable person and lacking of proper signs

Table 4: KTH library assesments

# Analyses

- Most of the scores given for overall assessment by surveyees are similar.
- Unlike similarity of scores, the descriptive overall assessments are diverse. It shows that these scores do not reflect same perceptions.

## Conclusion

- Educated architect students have different priorities to evaluate and describe environment.
- It is important to know what causes such differences in assessments and what is the boundary for designing building in right way. Each difference can be a new research question in universal architecture context to be taken into account in projects.

### Refrences:

- Arthur, P.; Passini, R, 1992: Wayfinding. People, signs and architecture.
- Rapoport, Amos,1990, the meaning of built environment.
- Steinfeld, E., 2012: Universal design, creating inclusive environments.