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SELECTING DESIGN CRITERIA

(Multiple Sorting Task: MST)

TIME: preparation + 3 hrs.

MATERIAL: colour copies from magazines and books, pens, paper.

PEOPLE: the working team and all willing participants.

A Multiple Sorting Task 'kit' made by architecture students at the University of Strathclyde.

WHAT IS A MULTIPLE SORTING TASK (MST)

Up to this point you have identified problems in your neighbourhood, located priority areas for improvement and established priorities for development and action.

A Multiple Sorting Task will help identify attributes and common preferences regarding spaces which can be reflected by designers in any future design proposal.

An MST is an exercise that will ensure design solutions respond to:

- local conditions;
- community ideas and priorities;
- innovation and best practices;
- perceived difficulties thus preventing unexpected problems.

It will achieve this through the use of images that represent good and bad solutions to a problem you are trying to resolve in your neighbourhood. The assessment of these images by the participants will reveal which of them they find inspirational, indifferent or downright unacceptable. In turn this will reveal what could be employed in your area with great effect, what would have little impact, and what should be avoided at all cost.

This process will lead to the formulation of criteria which design professionals will be expected to respond to as any future design proposal is made.

For example, an open space has been identified as a potential neighbourhood square. To establish the design principles for this square, photographic examples, ideally from places with similar environmental and climatic conditions can be studied and assessed as successful or otherwise. Positive examples can be as informative as from negative ones.

The study of these images throughout an MST will generate criteria such as security, functionality, visual appeal etc.

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Various images showing a Multiple Sorting Task being conducted. Different ways of presenting the images have been used including mounting the images on boards and hanging them on wires.

NOTES TO FACILITATOR

Using colour images to carry out the MST, ideally in A4 format, will cost money. You need to reflect this in your budget for the working sessions.

When preparing for a MST it will help if many people get involved in collecting images. Someone may have a PC at home and could surf the internet; there are many web sites offering good pictures of cities and towns; someone else could search for images going through magazines, etc. Be careful to observe any copyright issues.

It is useful to ask professionals such as architects or landscape designers, or universities to advise you in the search for images; they have magazines, PCs and importantly, know where to search.

Focus your attention on one priority area at a time and identify how, and according to which principles, each individual project should be carried out.

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THE PROCESS

1. Selection of images

○ As required

From previous exercises you will now have a clear indication of your priority areas and envisaged improvement projects, for example the creating of a neighbourhood square. Now collect twenty to thirty colour photographs which should show a range of examples of projects similar to the ones you want to undertake.

Your images should represent different solutions and variations. The selected photographs or prints should vary from successful to defective solutions. They should have a similar size, ideally A4, and could include your own pictures taken during the Photographic Survey.

It is important that these images are not only representative of your own preferences and dislikes, but include a good range of 'built examples' that illustrate issues raised in the previous exercises (i.e. respond to criteria like security, patterns of use, performance of space etc.).

2. Preparation

○ 30 mins

Lay out the images and select those which represent the widest variety from one another.

Give each image a number and either write this on the corner of each image or attach a small sticker containing the number. This will help to keep track of selection preferences.

Draw, or layout on a PC, a table with three columns entitled 'characteristic', 'image number' and 'description', as below.

3. Conduct the MST

○ 30-45 mins

Distribute copies of the table and pens to your group to record their reactions. Ask the participant to:

- examine the pictures and think about what they represent. Make sure to closely examine details;

- individually sort the pictures into groups with common themes. The selected group of pictures may, for instance, have to do with safety, security or maintenence. Call this a Record Sheet;

- write down the name of the characteristic and list the corresponding image numbers beside it. Also note a brief description of the qualities conveyed by the image.

It is obvious that each picture can be sorted on the basis of a number of criteria and can therefore be part of a number of different groups of pictures. Once team members have established one sorting of pictures by one specific 'label', they should then proceed by thinking of another 'label' or criterion and select those images that respond to it. Repeat Step 3 as many times as possible with as many different criteria they can think of.

Example: Neighbourhood Square

Image No.	Characteristic	Description
3	Threatening	Dark and badly maintained
9	Safe and welcoming	Bright, open
25	dangerous	Overgrown/poor visibility

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4. Interpret the answers

○ 1 hr+

Once participants cannot find any new themes, translate the outcomes into practical information.

Collect the tables in order to identify and record the following:

- characteristics;
- image numbers which relate;
- description of images;

Go through all the record sheets. You will spot similarities, repetitions, but you will also notice that some criteria can be grouped together under a more general heading. It would be useful to form criteria groups of similar size with 6-8 criteria each. For example, 'poor lighting' and 'overgrown gardens' may relate to 'security'.

Go back to the record sheets and write down all the attributes that people recorded under each sorting 'label'. Again, group them when similar, eliminate repetitions, and try to pair positive and negative attributes. The aim is to produce a table as in the example on page 87.

For example, in the exercise about public neighbourhood squares, some of the 'paired attributes' identified were:

Beautiful	Ugly
Contained	Open
Structured	Unstructured
Rich	Poor
Rigid	Flexible
Neat	Run down
Controllable	Uncontrollable
Accessible	Inaccessible

Finally, add to each pair of attributes an assessment scale from 1 to 5 (1= least; 5= best), as below.

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This table shows how criteria and attributes were paired in the exercise on public neighbourhood squares, and how the assessment scale was added.

Environmental Assessment Form

Criteria Group: Nature of Open Space

Criteria	Attributes (-)	1	2	3	4	5	Attributes (+)
Overall appearance of the space	Ugly						Beautiful
Integration of spaces	Unstructured						Structured
Variety of spaces	Poor						Rich
Organization of spaces	rigid						Flexible
Upkeep and maintenance	Run down						Neat
Safety and accessibility	Uncontrollable						Controllable
Utility	Inaccessible						Accessible
.....	.....						....

CONDUCTING THE MST

Sorting 1

SAFETY

image no.22: Controllable, can see everyone at any time

image no.7: hidden corners, vegetation and bushes dangerous

image no.15: hidden corners, vegetation and bushes dangerous

22
7
15

Sorting 2

ACTIVITIES TO DO

image no.5: Good variety of activities for all ages

image no.2: the space deters old and very young people from gathering

image no.23: the space deters old and very young people from

22
7
15

safety
cleanliness
maintenance
accessibility
variety of activities
vitality

Activities in

benches
vegetation
location of facilities
accessibility
category 5
category 6

Facilities i

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ACTIVITIES	
	liveliness/vitality
	co-existence of different activities
	variety of activities that take place
	level of engagement
	management of activities
	safety
	accessibility

FACILITIES	
	liveliness/vitality
	co-existence of different activities
	variety of activities that take place
	level of engagement
	management of activities
	safety
	accessibility

By the end of the exercise, it is very likely that you will have information gaps either in the list of criteria or in the list of attributes. Make sure that all participants fully agree with the lists, that they recognise each criterion and attribute, and are satisfied with the attributes that are paired. Ask participants to help you find the right criterion or attribute where they are missing.

If by the end of this 'test-run' of filling gaps you still have some, you could consult the following table which contains a comprehensive list of criteria and attributes which was collated from several sources (specifically from publications by Hershberger and Naser). For all those interested in accessing any of these resources, there is a summary of key publications at the end of the handbook.

If you have gaps in your table, you can find help from this list. Make sure that whatever you get from it is fed back to the participants. It is important to get as broad greement on the final table, its criteria and attributes.

Assessment Criteria	Primary pairs of attributes	Alternative pairs of attributes
1 General evaluation	good – bad	pleasing – annoying
2 Utility evaluation	useful – useless	friendly – hostile
3 Aesthetic evaluation	unique – common	interesting – boring
4 Activity	active – passive	complex – simple
5 Space	cozy – roomy	private – public
6 Potency	rugged – delicate	rough – smooth
7 Tidiness	clean – dirty	tidy – messy
8 Organisation	ordered – chaotic	formal – casual
9 Temperature	warm – cool	hot – cold
10 Lighting	light – dark	bright – dull

Assessment Criteria	Secondary pairs of attributes	Alt. secondary pairs of attributes
	old – new	traditional – contemporary
	expensive– inexpensive	frugal – generous
	large – small	huge – tiny
	exciting – calming	beautiful – ugly
	clear – ambiguous	unified – diversified
	colourful – colourless	vibrant – subdued
	safe – dangerous	protected – exposed
	quiet – noisy	distrcting – facilitating
	stuffy – drafty	musty – fresh
	rigid – flexible	permanent – temporary

EXAMPLE

In one of the pilot projects, we prepared a MST for a neighbourhood square. Pictures of the square itself were already available from the Photographic Survey. We also had preliminary comments by the community on the square, gathered during the Goal Setting and the Mental Mapping exercises. The square did not respond to the community's expectations. Therefore members of the team observed and recorded its use through Behavioural Mapping and discovered that the space was under used, not child-friendly, not properly equipped, had an excess of dog waste, litter and was full of broken glass.

Keeping in mind issues that had been raised previously in discussions about the square – criteria such as security, friendliness, atmosphere, street-furniture, surfaces, sense of place, definition and enclosure, clarity of design etc. - we started collecting images of squares that responded to one or more of these criteria.

We searched in magazines, newspapers and the internet, until around 50 images were available. We then went through these 50 images and eliminated those that a) were too similar to other examples, b) were not of an appropriate visual quality c) were completely out of size and scale in comparison to our square. We then pasted all the images on cardboard and numbered them.

With the images ready and a meeting organised, we introduced the exercise to the participants.

We asked them to study the images and sort them into groups - without limitations either regarding the number of groups or the number of images contained in each group - according to criteria and attributes they considered significant. We asked them to 'label'

each group and record the number of each picture in each group.

The MST took place in two separate rooms: we separated adults and youths. Each group was divided into smaller groups and asked to sit around a table where the images were spread and visible to each of them.

As the room was large, participants did not disturb each other, and enough time was given to everyone to generate any sorting they found relevant. This process generated a list of qualities that not only established criteria for the design of a neighbourhood square but also a comprehensive list of attributes a neighbourhood square ought to have.

We collected the Record Sheets and interpreted them, generating the table on page 87.

The examples used in the previous pages were generated during this event.

Neighbourhood square environmental assessment form

Nature of open space	Criteria	Attributes (-)	1	2	3	4	5	Attributes (+)
	Overall appearance of the space	Ugly						Beautiful
	Integration of spaces	Unstructured						Structured
	Variety of spaces	Poor						Rich
	Organization of spaces	Rigid						Flexible
	Upkeep and maintenance	Run down						Neat
	Safety and accessibility	Uncontrollable						Controllable
	Utility	Inaccessible						Accessible
Buildings surrounding the square	Criteria	Attributes (-)	1	2	3	4	5	Attributes (+)
	Appearance	Ugly						Beautiful
	Relationship between parts	Ambiguous						Well defined
	Variety	Unstructured						Structured
	Style/Quality	Poor						Rich
	Maintenance	Rigid						Flexible
	Safety/Security	Monotonous						Varied
	Accessibility	Run down						Neat
Street Scape	Criteria	Attributes (-)	1	2	3	4	5	Attributes (+)
(lighting seating, vegetation, paving)	Quality of appearence	Ugly						Beautiful
	Distribution	Ambiguous						Well defined
	Variety	Unstructured						Structured
	Style	Poor						Rich
	Maintenance	Rigid						Flexible
	Safety	Monotonous						Varied
	Accessibility/Useability	Run down						Neat
Activities	Criteria	Attributes (-)	1	2	3	4	5	Attributes (+)
	Liveliness	Pleasing						Annoying
	Co-existance of different activities	Clear						Ambiguous
	Variety of activities	Specialised						Mixed
	Level of engagement	Participatory						Spectating
	Management	Considered						Casual
	Safety/Security	Controllable						Uncontrollable
	Accessibiltiy	Open						Restricting
Atmosphere	Criteria	Attributes (-)	1	2	3	4	5	Attributes (+)
		Attractive						Boring
		Cheerful						Gloomy
		Creative						Dull
		Welcoming						Repulsive
		Natural						Artificial
		Relaxing						Stressing
		Safe						Dangerous
		Free						Claustrophobic
		Pleasing						Annoying
		Engaging						Inhibiting

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MAKE PLANS

Previous working sessions have produced a comprehensive definition of the strengths and weaknesses of your priority areas, of actions to be taken and the priorities of each of these actions. This is a draft Neighbourhood Plan which requires approval by the whole community.

In addition, carrying out the MST will have generated two things:

- a description of criteria that any future design projects ought to respond to, and of attributes which design solutions should embrace or reject.

- criteria which can be used in an evaluation to establish perceptions of design quality in relation to future design projects.

Again, you need to get the support of the community for the design attributes, and this needs to be achieved in the following working session, Environmental Assessment.

The next task is to prepare the information gathered during the MST, and organise them into a format that can be brought back to the community, and stimulate their thoughts on your selected action areas.