Outdoor play in urban contexts

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Can urban environment be child-friendly?

Societal relevance
- Families and children reside increasingly in urban environments
- Children’s spaces have become more institutionalized

I will ask
- How children use urban environments?
- Which elements attract children?
- Can urban setting promote independent & active mobility?
- How can we include children in public participation?
Environmental childfriendliness

Kyttä (2003)
The decrease of children’s independent mobility in 20 years in Finland

Decrease in CIM
- In cities: not significant
- In countryside: highly significant

Kyttä et al. (2015)
Affordance ‘spectacles’
Affordances of urban environment
Possibilities for independent mobility reveal many affordances. The actualization of affordances motivates further exploration and mobility in the environment.

Any environment where children are allowed to be a part of every day life
Affordances of every day life

Negative affordances: risks and dangers

WHY BULLERBY?
according to Astrid Lindgren, Swedish writer

Social affordances

Duties as affordances
In spite of mobility restrictions, the environment appears as a rich source of affordances. The awareness of affordances can be based on second hand information.
Place-based approach in child-environment research
softGISchildren studies
SoftGIS methodology:
A place-based online survey e.g.
- Mapping of affordances
- Licences for independent mobility

My important places
Please mark on the map positive and negative places. In which places:
- You find it easy or difficult to do things?
- There are good or bad social relationships?
- You feel good or bad?
Some findings
Context specific knowledge from children

In Lauttasaari there are not many places to hang outdoors with friends. This is almost the only place.

Quite okey place for biking!

Cool forest! If this falls down, so will you!

I would appreciate a better skate board park, cause it is becoming a bit rotten. So please invest a few euros there..

Here adults hit the gas pedal

Here I crashed with my skateboard for the first time

In Lauttasaari there are not many places to hang outdoors with friends. This is almost the only place.
The childfriendliness of the city of Turku

- 1863 children from 54 schools
- 12,343 pin-pointed affordances
- 5735 little stories
Environmental childfriendliness a la Bullerby model


[Map showing population density and Bullerby model with different areas colored for Wasteland, Bullerby, Cell, and Glasshouse, with numerical values for population density indicated.]
Factors that predict children's environmental experiences and their perceived health and wellbeing

URBAN STRUCTURAL VARIABLES

- Residential density
- Proportion of Green structure

EXPERIENTIAL & BEHAVIORAL FACTORS

- Activity of school journeys
- Distances to affordances
- Territorial range
- Likeability index
- Perceived dangers

PERCEIVED HEALTH & WELLBEING

- Overweight (BMI)
- Daily symptoms
  - physical
  - psychological
- Perceived health

= highly significant positive association
= highly significant negative association
Similar studies in other Finnish cities (e.g. Broberg et al. 2013)
Where are positive experiences located?

Land use around positive place locations of various age groups (n~4000) (Laatikainen et al. 2017)
Contextual differences
Contextual differences

3836 meaningful places with 13,264 affordances from Helsinki, Finland and Tokyo, Japan (Kyttä et al, 2018)

Finland
- More positive affordances
- More social affordances
- More emotional/contextual affordances

Japan
- More functional affordances
  - Especially for recreational and competitive sports and games
The location of meaningful outdoor places

Finland
- Average distance from home: 2.4 km
- 67% journeys made actively
- 7% with adults

Japan
- Average distance from home: 1.1 km
- 91% journeys made actively
- 13% with adults
- Concentrated more around schools
Behavior settings – clusters of affordances

Behavior setting refers to a set of social codes of behavior in a given context (Barker 1968).

Here: Clusters of affordances that are identified by a group of children.
Expert audit
- Classification of outdoor behavior settings by experts
Behavior settings

189

behavior settings in Helsinki and Tokyo

Here: a shopping centre in Helsinki
Behavior settings in Helsinki and Tokyo

In both countries:
Indoor and commercial settings perceived most positively, traffic areas most negatively

Japan: Commercial, recreational, traffic and religious settings more common
Finland: Natural and educational settings more common

<table>
<thead>
<tr>
<th></th>
<th>Finland</th>
<th>Japan</th>
<th>Difference between the countries</th>
</tr>
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<tbody>
<tr>
<td><strong>Openness</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Indoor</td>
<td>30.9%</td>
<td>34.2%</td>
<td>n.s.</td>
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<tr>
<td>Outdoor</td>
<td>57.3%</td>
<td>58.2%</td>
<td></td>
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<tr>
<td>Both</td>
<td>11.8%</td>
<td>7.6%</td>
<td></td>
</tr>
<tr>
<td><strong>Communality</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Shared</td>
<td>78.2%</td>
<td>83.5%</td>
<td>n.s.</td>
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<tr>
<td>Child specific</td>
<td>21.8%</td>
<td>16.5%</td>
<td></td>
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<tr>
<td><strong>Land use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational</td>
<td>22.9%</td>
<td>16.5%</td>
<td>$X^2 = 24.6$, df = 5, $p = .000$</td>
</tr>
<tr>
<td>Commercial</td>
<td>21.9%</td>
<td>26.6%</td>
<td></td>
</tr>
<tr>
<td>Recreational</td>
<td>27.6%</td>
<td>30.4%</td>
<td></td>
</tr>
<tr>
<td>Natural</td>
<td>22.9%</td>
<td>3.8%</td>
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<tr>
<td>Traffic</td>
<td>3.8%</td>
<td>15.2%</td>
<td></td>
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<tr>
<td>Religious</td>
<td>1.0%</td>
<td>7.6%</td>
<td></td>
</tr>
</tbody>
</table>
Towards large-scale & influential children’s participation
An online participatory planning support system: the Maptionnaire tool

Try it out...
www.maptionnaire.com

Build and manage

Collect data

Analyze, visualize and communicate
Place-based data from children used in the Master plan: city of Lahti
(Aino Leskinen, 2014)

- 292 participants
- Response rate 84%
- 3190 localized affordances
Place-based data from children can be integrated to existing systems

Case: City of Lahti, Finland

**DATA in the GIS system of the city**
- Knowledge from children from 59 day care centres
- Natural areas/places used in early childhood education
- Routes to places

The detailed plan proposal did not acknowledge the route used by children through private property. The route has now been marked in the plan proposal 2016.
Conclusions

The basic requirements of child-friendly settings can be met also in urban environments.

Children use urban spaces in a variety of ways.

Significant differences can be observed between contexts -> need for contextually specific knowledge directly from children.

Children and young people can be included in participatory planning and influential, large-scale knowledge can be produced.
Thank you!

Selected publications:


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https://maptionnaire.com/