

Children and the environment – the influence of attitudes, perceptions and social networks on behaviour and activity patterns

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The key issues

In Britain, compared with the past,

- children go out less
- fewer children are allowed out without an adult
- fewer children walk to school



Why does this matter?

- Less physical activity, with consequences for health
- Loss of social interaction with other children and adults
- Loss of opportunities to gain independent decision-making and cognitive skills



The context of the research

Children's
Activities
Perceptions
And
Behaviour in the
Local
Environment



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CAPABLE

- Funded by EPSRC for 2 years from August 2004
- Joint project between CTS, CASA, Bartlett School and Psychology Department at UCL
- Approach:
 - Develop research tools to investigate children's spatial behaviour, perceptions and relationship networks, and parental attitudes
 - Analyse how children use open spaces
 - Develop new models of children's outdoor movement patterns

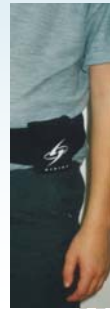


The research tools

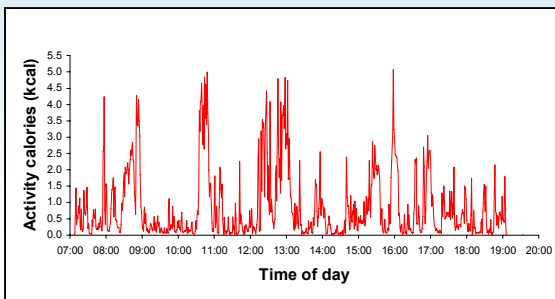
- Monitoring children's travel and activity patterns:
 - Motion sensors
 - Diaries
 - GPS monitors
- Questionnaires surveys of children and their parents, carried out through schools
- Interviews with parents and with children, including mapping exercises
- Children's drawing exercises



The RT3 motion sensor

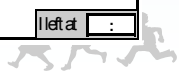


An example output from an RT3

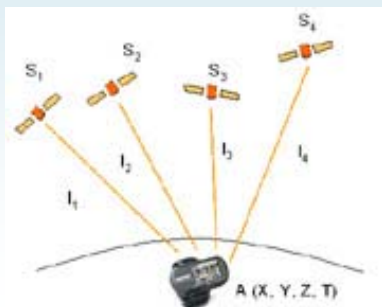


A child's travel and activity diary

Then I went to...	I got there at	Played on the computer then played football
Peter's house	15:20	
	I travelled there by	
	Walked	I left at 18:40
Then I went to...	I got there at	Watched TV and went to bed
Home	19:00	
	I travelled there by	
	Car	I left at :



The GPS equipment



Wearing the GPS equipment

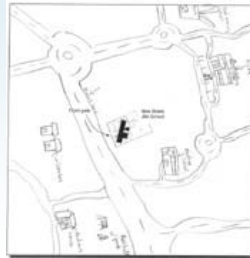


Linking the GPS and activity data



Analysis of children's maps

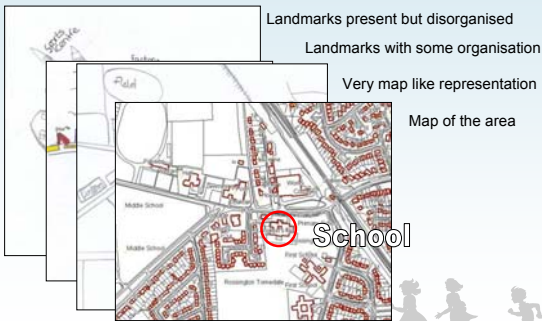
Area maps



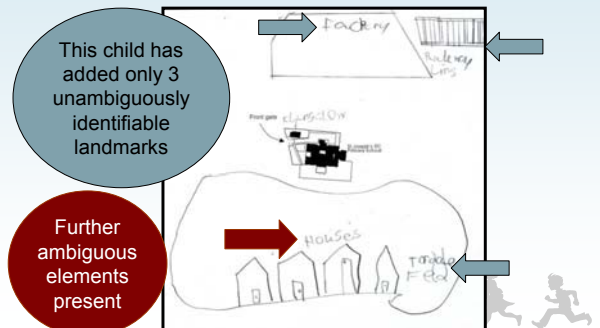
Route maps



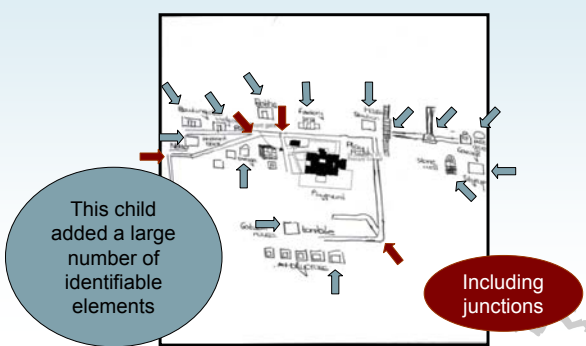
Classifying Maps



Low Element Example



High Element Example

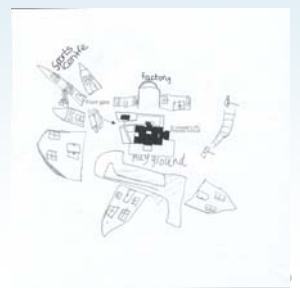


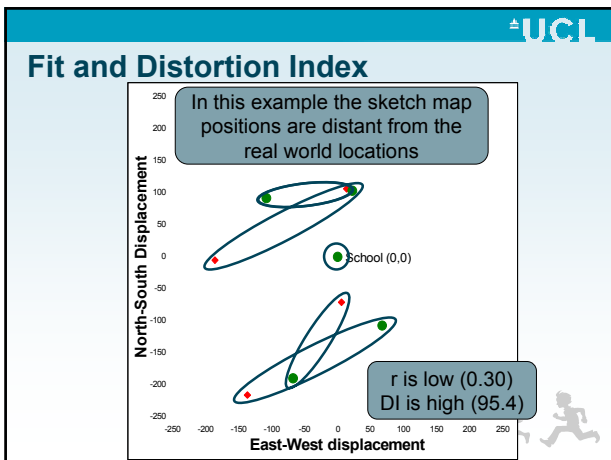
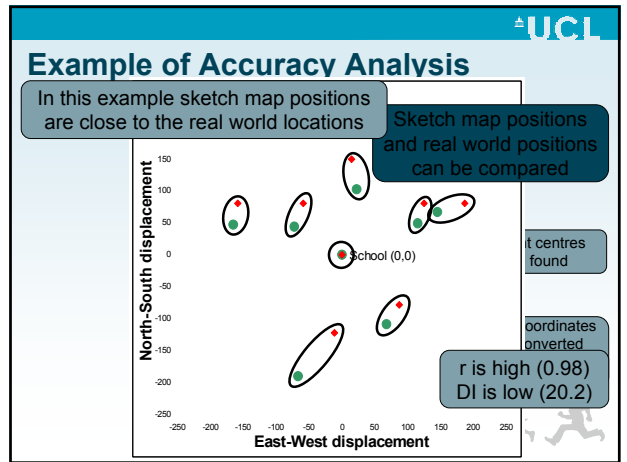
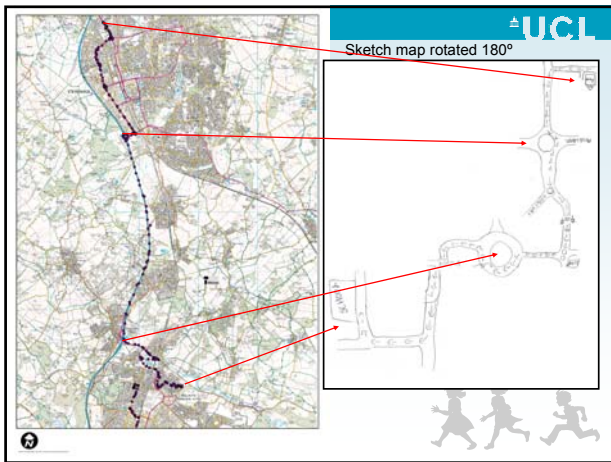
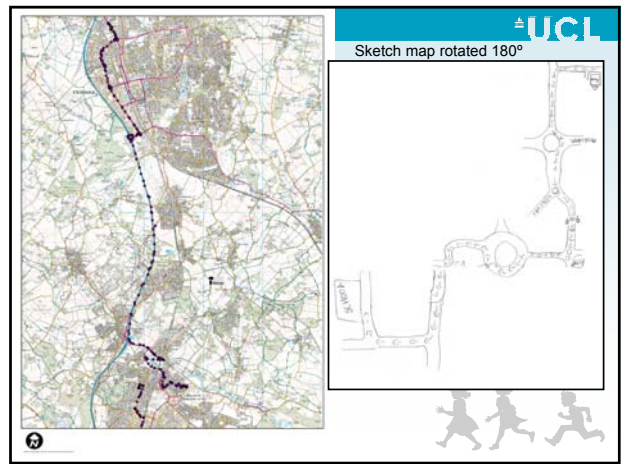
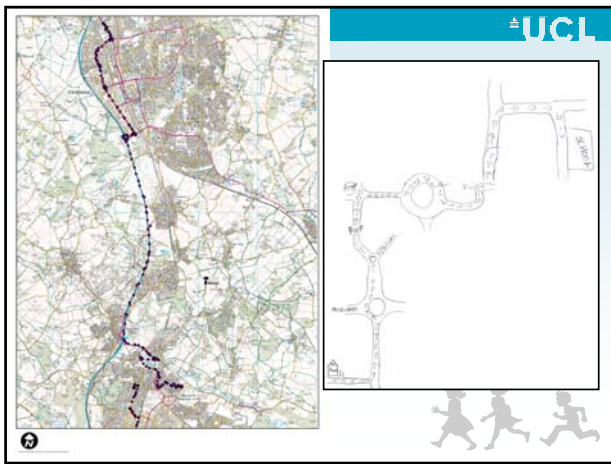
Area maps for children who travel to school by different modes

Walks to school



Driven to school





Results for Accuracy

	N	Mean	SD
Car usually used for the journey to school	31	51.7	22.6
Other mode usually used for the journey to school	28	41.0	18.9
Male	32	44.7	19.6
Female	27	48.9	23.5
Year 4	28	47.4	20.1
Year 6	31	45.9	22.8
Overall	59	46.6	21.4

Possible barriers to children's unaccompanied use of the local environment

- Parental concerns about safety
- Lack of familiarity with the local area
- Unsuitable local environment
- Lack of suitable transport
- etc, etc



The study areas

Hertfordshire



Lewisham



The number of responses to the children's questionnaire

	Boys	Girls	Total
Year 4	45	48	93
Year 5	44	40	84
Year 6	52	65	117
Total	141	153	294



Percentage of children allowed out without an adult

	Total
Year 4	50
Year 5	74
Year 6	75
Total	67



Percentage of children allowed out without an adult

	Total	Boys	Girls
Year 4	50	53	47
Year 5	74	77	70
Year 6	75	84	69
Total	67	72	62



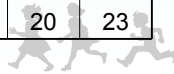
Percentage of children allowed to travel without an adult

	Total
Go out on a bicycle	68
Go out for a walk	65
Cross main roads	58
Travel to friends' houses	54
Travel to organised activities	33
Cycle on main roads	28
Go on buses	22



Percentage of children allowed to travel without an adult

	Total	Boys	Girls
Go out on a bicycle	68	71	65
Go out for a walk	65	66	64
Cross main roads	58	63	53
Travel to friends' houses	54	63	46
Travel to organised activities	33	41	26
Cycle on main roads	28	38	19
Go on buses	22	20	23



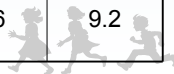
Age at which children were first allowed to travel alone

	All
Travel to friends' houses	8.0
Cycle on main roads	8.0
Cross main roads	8.3
Go on buses	8.9



Age at which children were first allowed to travel alone

	All	Boys	Girls
Travel to friends' houses	8.0	7.5	8.6
Cycle on main roads	8.0	7.9	8.1
Cross main roads	8.3	7.9	8.7
Go on buses	8.9	8.6	9.2



Effects of local family ties on being allowed out alone

How many of mother's and father's parents and siblings live locally?	% of children allowed out alone
0	63%
1	67%
2	68%
3	70%
4	83%
Overall	66%



Differences between the children in Hertfordshire and Lewisham in being allowed out alone

Percentage:	Hertfordshire	Lewisham
Allowed out alone	71	64



Children in Hertfordshire and Lewisham

More children who live in Hertfordshire are allowed out alone than those who live in Lewisham.

But, children in Hertfordshire:

- Cycle less;
- Walk to school less;
- Live in households with higher car ownership;
- Have fewer relatives living nearby.

So, other factors must be important - possibly the nature of the local area and parental perceptions of it.



Conclusions

- Children's interactions with the local environment are complex and we need a range of techniques to understand them.
- Allowing children to walk about more without adult supervision can help them to develop physically and mentally.
- One barrier to this, is parental concern about children going out without an adult.



More conclusions

- In the surveys in Hertfordshire and Lewisham in Britain, about 2/3 of the children are allowed out alone.
- Freedom to go out increases with age.
- Boys are allowed out more than girls.
- Children in Hertfordshire are allowed out more than those in Lewisham.



More conclusions

- The more relatives that children have living locally, the more likely they are to be allowed out alone.
- Of the forms of travel children can do alone:
 - Cycling is allowed most;
 - Going on the bus is allowed least.
- The nature of the local area, or how it is perceived, seems to be influential.



For more information:

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Suggestions for further dissemination welcome

