CHILDREN'S IMAGES OF HARWICH

Jeff Bishop (and Jane Foulsham)

Architectural Psychology Research Unit, School of Architecture, Kingston Polytechnic, Knights Park, Kingston upon Thames, Surrey, England.

Abstract

This study started when, during a field project in Harwich by Architecture students, over 200 maps were obtained showing children's perceptions of their routes from home to school. Despite this uncontrolled beginning, an attempt has been made to follow up other similar work and add two things perhaps as yet little studied. Firstly, to follow development of mapping style and content by age, and secondly to relate the items shown by the children to the particular physical environment of Harwich.

Earlier Studies

Kevin Lynch, with environmental notation, Terence Lee with the concept of schema, and Jean Piaget with his subdivisions of development both general and spatial, are the main foundations for comparisons and method in this study. The first two have done work on mapping, extended through studies by Appleyard, Lynch again, Orleans and Schmidt, and my own casual work. Conclusions have been reached about the ways in which maps are constructed, (although more so far with adults than with children) the type of item shown, some differences between men and women, and the effects of mode of transport. Cultural context has been well studied, physical context a little, but class difference not at all that I can discover. Terence Lee's work provides a much-needed bridge between the over-emphasis on the actual physical fabric by Lynch etc., and the lack of physical description by some psychological studies. Nobody, however, gives the location of their study enough consideration in my terms, and this is true also of Piaget's work. No criticism is meant, because he only barely touches on the environmental aspects of spatial development, but my own previous work has suggested that his categories are nevertheless applicable. Gary Moore gives a detailed hypothetical description of how those categories could relate to large scale environments.

Physical Form of Harwich

Harwich has developed back from the end of its peninsula, (see fig.8) towards the main bulk of Essex. This movement started
with Harwich filling the top area with a strip system of roads, Dovercourt following on considerably later, and Bath Side forming the third main focus. More recently the gaps have mostly been filled, although the topographical gap between Harwich and Dovercourt is still clearly apparent. Bath Side has always been cut off by the railway and has consequently stayed physically stable. The contours are indistinct and there are few slopes significant for providing an overview on children’s routes, with the exception of the view to Dovercourt from the Bath Side footbridge, and the hill down Elmhurst Road leading directly to the Secondary School. The hill up from the Kingsway traffic lights is steep, and this road, along most of its length, gives views of up to 1 mile, simply by being straight. There are two main shifts of axis along Main Road/High Street. From Harwich itself, there is a turn to the first stretch of Main Road, and, by the park, Main Road curves into High Street. The former shift is clear in the other roads, the latter does not correspond with the axial shift on adjacent roads. The axes disappear inland from the Secondary School, more so north of the Main Road than south.

The majority of buildings are, quite naturally, houses of mixed form and age. The only large new area is that classed as West Central Ward, built in the last seven years, (and hence affecting responses from children living there who were not born in the area). Shopping is now confined largely to Dovercourt High Street and Kingsway, many shops having new fronts, but few being in whole new blocks. The scale everywhere is low and ‘domestic’, with the few usual exceptions such as the Singo Hall, Regal cinema at the time of the study. If one used subjective analysis of the Kevin Lynch type, there would be little to note. The lighthouse, Harwich church, the Bath Side gas holders, the football field, the ‘Mayor’s’ park and the old cinema are the landmarks. Kingsway traffic lights, the West Street and Church Street junction are the nodes, the sea and the railway are the edges and the barriers. The districts are fairly distinct and are partly determined by the topography. 1. Harwich itself 2. Bath Side 3. Grafton Road/Harbour Crescent area, the ‘gap’ between Harwich and Dovercourt. 4. Dovercourt centre. 5. Manor Lane area 6. West Central Ward. These are, by and large the areas used in the analysis.

One very important point to note about Harwich generally is that one can travel through it for a few miles with the sea never more than a short distance away on both sides, yet never see it until one goes up West Street at the far end of the peninsula. The relevance of this will be returned to later.

Numbers Involved, Task Set, etc.

Two Junior classes, (average age 9) one each from Harwich and
Harwich school were selected. Harwich takes children from above Kingsway, Mayflower from below Kingsway, to the edge of the map:

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<thead>
<tr>
<th></th>
<th>girls</th>
<th>boys</th>
<th>total</th>
</tr>
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<tbody>
<tr>
<td>Harwich</td>
<td>20</td>
<td>18</td>
<td>38</td>
</tr>
<tr>
<td>Mayflower</td>
<td>15</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>32</td>
<td>67</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>girls / boys</th>
<th>bus / walk</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>15</td>
<td>16</td>
<td>31</td>
</tr>
<tr>
<td>1B</td>
<td>16</td>
<td>14</td>
<td>30</td>
</tr>
<tr>
<td>1C</td>
<td>14</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>1D</td>
<td>21</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>1E</td>
<td>17</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>1F</td>
<td>14</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>unknown</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Totals</td>
<td>99</td>
<td>67</td>
<td>179</td>
</tr>
</tbody>
</table>

Some children travel up to 15 miles by bus or train.

The mapping was done in June 1972 (except for Mayflower school, done later that year), in a period of fine weather. The children were asked basically this question: "Draw a map showing your route from home to school, showing the things you notice on the way." They all had the same time, teacher and paper. They were permitted to use colour and erasers. We were only present at Harwich Juniors and at the Secondary School for the 16.

Analysis of Locatable Content of Maps

Drawings 1-7 show a summary of analysis achieved by recording the source and path of the chosen route, and the roads and objects shown on each map.

Drawing 1. Routes taken: (drgs. 1-4 are for secondary children, 1I-16 years old). The most noticeable thing is the lack of overlap and the resulting easy division into areas, basically the same as the 'districts' but with one sub-division south of Main Road. The impact of the lack of overlap is mentioned later but one implication is the non-existence of a place where children can meet friends from an area other than their own except very near the school gates. Only in West Centra Ward is there a real choice of route.

Drawing 2 Roads and Landmarks shown: my emphasis on routes and the context of a geography lesson, probably explains the low
number of roads and landmarks off routes. The few mentioned are
worth comment. Manor Lane is a local play area, King George's
Avenue and Shaftesbury Avenue fringe the school grounds, Patricks
Lane locates the cinema and Kingsway is the only road crossing
High Street. The distribution of landmarks by areas is interest-
ing seeming to confirm architects' use of the term "visual rich-
ness"; compare the large numbers of landmarks in Harwich itself
to the low numbers in West Central Ward, where the only real
landmark is a block of shops.

Drawing 3. Proportional Distribution of Roads and Landmarks:
Comparing this with dro. 2 it is most noticeable that physically
large landmarks emerge only minimally when given proportional
representation. The best example of this is the lighthouse in
Old Harwich, (a much-photographed building) which scores much
lower than the public convenience adjacent to it. Telephone boxes
score highly, (there is low telephone ownership) and two public
houses do better than one might expect! The fact that sweet shops
score better than even Mayflower School, (although the latter was
the children's previous school) typifies the children's emphasis
on small-scale personalised landmarks. Several children show
all the shops along High Street, named and in the correct order.
The roads show little except a consistently high coverage, the
only inconsistency happening north of Kingsway where the clutter
of roads led to one or more being omitted from most maps.

Drawing 4. Proportional Breakdown into Areas: this map was
prepared to point out that the apparently comprehensive coverage
of the top end of the town on dro. 3, is actually the result of
combining information from two sets of mutually exclusive maps.
Children would either show everything on one side of the road or
the other, never both. The areas are described separately:

Area A:- (the old part of Harwich and the roads to the east of
Main Road). These children travel by bus and their maps show
only items on their left during their journey. The only road
shown to the right is Kingsway and no landmarks are shown there
despite the existence of their previous Junior School, the Police
Station and a large church. Two explanations for this are
possible, firstly that I asked for a route to school and secondly
the more notorious play areas for the children lie on that side
of the road. Maps from school to home might help to confirm this.
There are two major bends on the road, yet only one of these was
shown by all the children. The bend at the Old Town end was not
shown, and is awkward because it connects Main Road to a parallel
array of roads, a situation which people in their maps often
tend to try to straighten out. The bend further down however
was shown and this is probably because the triangular park makes
it very clear, and also the children would feel the bend physic-
ally while on the bus. (This does not apply to the other bend).

Area B:- (to the west of Main Road and including children arriving
by train from outside the town). These maps show the things not

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shown by children from Area A, the roads on the right of High St. and also all the landmarks there. These children all walk along the right-hand side of the road and although shop names can be read more easily from across the road, and many shops over there would seem more interesting to the children, it is only those on their own side which they show. One can argue that heavy traffic is a deterrent but contradictions still remain.

Drawing 5. Routes Taken:— (drgs. 5-7 are for the 9 year olds). The first comparison with drg. 1 is in simple density. An expectation of more idiosyncratic routes was not confirmed, except by one girl who went over into Bathside to pass a sweet shop and her old school.

Drawing 6. Roads and Landmarks shown:— the idiosyncrasies do begin to emerge here, with some roads used but not shown and some shown but not used. Of the latter, most significant is Manor Lane, used by only one child but shown by many. The same is also true to a lesser extent of the alleys by the railway in Bathside. The first thing to notice about the landmarks, remembering the numbers of children involved is the number of items shown, from larger landmarks down to personal items. The coverage is balanced between sides of roads and the comment on visual richness applies again.

Drawing 7. Proportional Distribution of Roads and Landmarks:— Inconsistencies really emerge on this drawing with changes in road widths and distortions of circle diameters, occasionally up to 300%. Proportions, as before, are higher for the personal items than the large landmarks, particularly Manor Lane and the Council-yard area. The Bathside level-crossings read very strongly and emphasise the feeling of isolation. In the old town area roads are often shown when not used, probably an example of the children putting down a system first and then relating to it.

Analysis of Categorised Items Shown

All the maps were studied and mentions of specific items listed below were recorded on a form. The items were chosen to relate to a previous Research Unit study of 9 year olds, but some were inapplicable (there are no zebra crossings) and others were added and omitted for the older children. The categories were grouped and are as follows:

<table>
<thead>
<tr>
<th>Secondary</th>
<th>House etc.</th>
<th>Landmarks</th>
<th>Nature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>Known Links. off route</td>
<td></td>
<td>Street lamps</td>
<td></td>
</tr>
<tr>
<td>School Drive</td>
<td>Personal Links. on route.</td>
<td>Telephone boxes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Houses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shops</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sweet Shops</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Junior—House, etc. | Landmarks | Nature | Details
---|---|---|---
House | Known Links | Nature | Favouret
School | on route. | Colours | Traffic signs
School Drive | Known Links | People | Telephone boxes
off route. | Cars | Post boxes
Personal | Crossing | Bus stops
Links on route | Lady | Level crossings
Houses | Friends | Self
Shops | Sweat shops.

(One must add that the analysis merely records that items were mentioned at least once; there is no record of number of mentions)

Secondary (a) Boy/Girl Differences:— the average number of mentions decreases with age for boys, but not for girls and, (as they start off about the same) the total average is lower for boys. When broken into groups of items, few differences emerge by age, but girls show considerably more details than boys. Boys show more nature, and a possible explanation of this is given in the following section.

(b) In Town/Out Differences:— (this definition is rather arbitrary, being those living, as it were, off the map which broadly corresponds with the edge of the town). Children living in the town mention more items than those living outside. One might expect a lower mention of details and higher of nature by those from outside, but the scores reflect the same relative decrease as the total.

(c) Girl/Boy and In/Out Differences:— strangely, after the above, total average mentions for girls decrease in town to out, but increase for boys (there are actually more by boys outside). In mention of details boys (from out of town) score considerably higher, and to complement this, girls in town score considerably higher on nature.

(d) Walking/Bus Differences:— as expected, walkers scored higher in total. They did not, however, make more use of landmarks as expected, but were higher on nature, (most, but by no means all, come from out of town). No real sex differences emerged.

Another expectation, that mapping ability and content would rise to age 13 and then drop, was not confirmed strongly, but it was a common trend in all age comparisons.

Junior (a) Harwich/Hovercourt Differences:— surprisingly, the totals showed very little differences, but Harwich scored more highly on landmarks, Hovercourt on nature and details.

(b) Girl/Boy Differences:— again girls scored higher, about the same degree as in the Secondary School. Girls scored higher on landmarks and people, lower on details.
Analysis by Type of Map

The maps were also analysed by their type, again utilising headings from the earlier Research Unit study. The analysis was subjective, and the categories, with a brief explanation, are given below:

**Junior and Secondary:**
- **Pictorial:** almost self-explanatory, the use of elevation or other sketch not in pure plan.
- **Comprehensive:** the extent to which the information was even and wide covered all aspects.
- **Diagram:** e.g. utilisation of a grid which does not exist, or artistic abstract techniques such as exaggerated notations.

**Primary only:**
- **Distance Accuracy:** self explanatory.
- **Direction:** self explanatory, but particularly important in West Central Ward.
- **Scale:** relative only, e.g. between road widths and house size.
- **Connected:** to what extent the information is continuous and connected from home to school.

**Secondary only:**
- **Consistency:** the extent to which information is evenly spaced between home and school.
- **Rectangularity:** some children were clearly influenced, and limited by their use of rulers.

The categories were scored with nought, plus or minus (e.g. plus for well connected).

**Secondary School Results:** nearly all the maps were well connected, to scale, and accurate on distance and direction, so these categories were not used. The children were not at all Pictorial and it would be reasonable to relate this to Piaget's stages of development. They were not very comprehensive and scored the same on this as the 9 year olds. Strangely the score on Consistency (connected strongly with Comprehensive) was 0, suggesting that children were concentrating on their specific route, and not placing that route in its context. It is also surprising that secondary school children were more diagrammatic, (perhaps another example of development?) replacing personalised systems with more culturally determined systems (geography?). Although many used rulers, the rectangularity score was healthily low perhaps because many children came from West Central Ward, the mapping of which makes the use of straight lines difficult. The only important age difference is in rectangularity, the older children's lower reliance upon it is probably connected with drawing ability and familiarity with the town.

The sex differences are very interesting, girls being considerably more consistent than boys and less pictorial. These two seem to relate to girls' quicker intellectual development generally.
and the latter relates to girls showing less nature as mentioned in the previous section. To explain this is difficult, arguments about boys' outside play can be countered with arguments about girls being more interested in pictorial things, particularly Art. Boys are more diagrammatic but make considerably less use of rectangularity. This contradicts the results of Peter Orleans and Sophie Schmidt's work, but one starts to wonder about comparisons between English 9-year-olds and American housewives! If one adds that girls are slightly more comprehensive, the conclusion is that they are more capable and rely less on diagrammatic techniques. Comparing In Town/Out, consistency is the biggest difference, which is not surprising with practical difficulties of long journeys and a given size of paper. The fact that children in the town are less comprehensive may again connect with the observed lack of overlap on routes and chances to explore, the journey by bus providing many long views forward and to the side, placing the route in a context.

Junior School Results: the 9-year-olds were very Pictorial and as I have said, they were not very Comprehensive. They tended to be Diagrammatic, their sense of direction was good, but concepts of scale and distance are in early stages. The Mayflower School children's maps were better connected and slightly more accurate on distance. This can perhaps be explained by the places involved, Harwich being complex and having many varied incidents, and Dovercourt being more consistent, distance being a simple factor of how many houses were passed! (One must add that Mayflower school has the higher proportion gaining entry to the High School). The only sex differences are on Comprehensive and Connected, boys scoring less on both, and considerably less on the latter.

Conclusions
Looking first at development and content of maps other studies have been both confirmed and denied. I seem to have confirmed that mode of transport does affect mapping content, and that girls show more details. They do not, however, construct their maps as expected, but this is the problem area of English and American context. The results about relative visual richness have been interesting, and most of my expectations about Piaget's developmental stages in application to environment have at least not been denied. Children do move from localised personal items to more generalised items, more complete road systems and less use of natural objects and people. The type of map changed in the same way, the most pertinent things being Pictorality and Diagrammatic. I still feel surprised, however, at the low use of Pictorial elements.

It is difficult to comment too conclusively on the relationship between mapping and the actual physical fabric of Harwich. I am certainly convinced of the virtue of all mapping studies giving a physical description of the place mapped, even if the
reader hypothesises all his own connections. Children do liter- ally see their town differently to visiting architects and (one is almost certain) to adult residents. The difference is not so
much in the type of map or number of things shown; it is in
which things are shown, children generally ignoring 'architectural'
elements for more personal ones. (I must stress again that only
maps of routes were requested). This probably affected the
junior less and one cannot conclude that as children get older
they actually forget! We badly need some way of testing this,
although the complexity of such work is tremendous.

Postscript
I mentioned earlier on the impact of the slow build-up of
children's routes, and my postscript is about this and other
examples of architectural and planning implications. Many new
towns 'neighbourhoods' locate their schools in rather the same
way as Harwich High School now is by chance. Having now almost
given up the hope of fully integrated communities, we must surely
find some better place for children from middle-class and
working-class stress to mix than in the sort of tension-ridden
territory around school gates as in Harwich. Behind the
architectural use of the term 'visual richness' is the assump-
tion that there is some virtue in having interesting varied
environments, always stimulating the children. While accepting
this cautiously, I do think that there is an alarming lack of
environmental education for children of all ages, and at the
same time, a considerable lessening of variety in the environ-
ment. I would even suggest that the malaise, of which this
latter point is symptomatic, will show itself soon.

Michael Braune, in a criticism of a new building, describes the
problems of a less varied environment and draws a linguistic
analogy:-

'What is, however, far less arguable is that a child's linguistic
inventiveness is to some extent at least due to the extreme
richness of even the most poorly endowed languages. In a period
in which several levels of technology co-exist and in which no
single technology can in any case be actually said to dominate
formal solutions, any enlargement of the visual vocabulary and
its elaboration by example, must be thought to be a step in the
right direction.'

I do not have maps by 10 year olds, but it seems possible that
our educational system is numbing the young child's environ-
mental imagery, and rather abruptly! It would be a great pity
if we discovered this to be true, and also that our increasingly
monotonous environment is compounding it all.
<table>
<thead>
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<th>References</th>
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<tbody>
<tr>
<td><strong>Lynch, K.</strong></td>
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<td><strong>Orlans, P. and Schmidt, S.</strong></td>
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<td><strong>Piaget, J.</strong></td>
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