IN THIS CHAPTER YOU WILL FIND KEY IDEAS ON
CONCEPTS • FIELDWORK • GENDER DIFFERENCES • LOCATIONAL KNOWLEDGE
• MISCONCEPTIONS • PROGRESSION

Young geographers

'Our present-day knowledge of the child's mind is comparable to a fifteenth-century map of the world – a mixture of truth and error ... vast areas remain to be explored'

Arnold Gesell,
cited in Fisher, 1995.

Over the past few years there has been a growing interest in primary geography research and the misconceptions which many children hold about the world around them. The way in which children learn about places is complex and researchers are only slowly piecing together the story. Part of the problem is that there is no entirely logical or inevitable sequence of events. Learning is for many people a surprisingly idiosyncratic process in which ideas are acquired in an apparently random manner. Most people do not become systematic thinkers until they reach adolescence or even later.

It is also remarkably difficult to discover what is actually going on inside a child's head. We were all young once, but it is impossible to recapture the sense of awe and wonder which children experience on doing something for the first time. Adults can often only observe and deduce what seems to be happening from the outside.

Despite these complexities there is, however, one clear message: the skills and competencies of young children appear to have been consistently underestimated. In part this is due to an uncritical acceptance of Piaget's theories. Few people nowadays would contest Piaget's central thesis that children pass through developmental stages as they grow older. However, the age at which this happens, and children's ability to operate at different levels of understanding, is much more variable than was first thought. The more we find out about different aspects of geographical learning the further the roots go back into childhood.

Spatial awareness

Children first begin to discover the location of objects as they play with toys in their cots. Initially, taste and touch provide the main clues, but after about three months their vision improves and they become capable of focusing more sharply on objects. From about ten months onwards children begin to actively explore their environment. As they develop the ability to crawl, and then walk, the scope and range of the places they can visit expands enormously, though parents usually restrict these early forays for fear of dangers. However, as youngsters grow in ability and confidence, so they are allowed to go further afield. This introduces them to the environment beyond the front door.

Maps are essential tools in the discovery process, but how do young children learn to use maps and find their way from place to place? Wiegand (1992) describes an investigation by Bluestein and Acredolo which provides some interesting insights. Sixty 3-5 year-olds were asked to find a toy elephant hidden in a room. They were given a map that showed the layout of the furniture with the position of the toy marked with a cross. The results were impressive. Half the three-year-olds, three-quarters of the four-year-olds and all the five-year-olds were able to find the toy. Generally the children had little difficulty interpreting the map and appeared to understand that the room, furniture and toy were shown symbolically. Subsequent investigations showed the importance of aligning the map. When the map was rotated by 180 degrees only the oldest children were able to use it correctly and even they had difficulty.

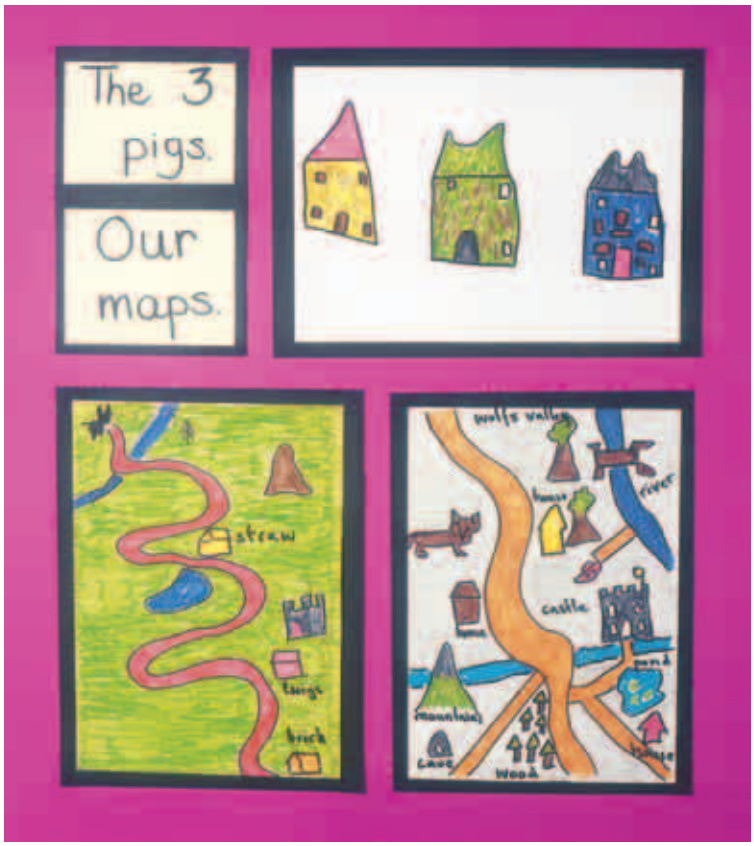

Figure 1 | *Drawings of the route taken by the wolf in 'The Three Little Pigs' by a reception, year 1 and year 2 children.*

Blades and his colleagues (1998) went a stage further and investigated the mapping abilities of four-year-old children in a number of different countries. After discussing the features on a vertical aerial photograph, the children were asked to trace a route from one house to another. Not only were the majority of the children able to complete the task successfully, they all demonstrated an ability to interpret the photograph whatever their cultural background.

Further evidence that spatial reasoning is universal and not related to cultural background comes from a study in rural Kenya conducted by Matthews (1995). Here pupils aged seven to thirteen were asked to draw a map of their village. Despite being almost completely isolated from Western influences and never having seen a formal map, the majority of the pupils completed the exercise successfully. Furthermore they recalled their environment in vivid terms using plan views and other relatively sophisticated representations.

Another issue which has occupied many researchers is whether there is a difference in spatial ability between boys and girls. Simple experiments in which children draw free-hand maps of a familiar journey, such as the route from home to school, have tended to show a clear distinction (Taylor, 1998). Boys are more likely to use plan views and show a larger area than girls who prefer to be precise and include small details. Generally, too, boys appear better at arranging the different elements of a map in their correct relationship and mastering abstract conventions.

These results are interesting because they reveal something about the way children perceive the spaces around them. Whether these differences are innate or the result of social and cultural upbringing is open to question. Matthews (1992), for example, argues that parents allow boys considerable freedom to explore the local surroundings. Girls, by contrast, are expected to help around the house, are allowed out less often and not permitted to go so far.

Research findings also provide compelling reasons for introducing children to mapwork from an early age. Many infant school teachers already take the opportunity to create 'pictures' to show journeys associated with stories and fairy tales. The route taken by the wolf in 'The Three Little Pigs' is a typical example (Figure 1). However, the fact that children seem to draw maps spontaneously long before they learn to read or write suggests that spatial awareness is a fundamental skill which should be developed in nurseries and other pre-school groups as a basic educational entitlement.

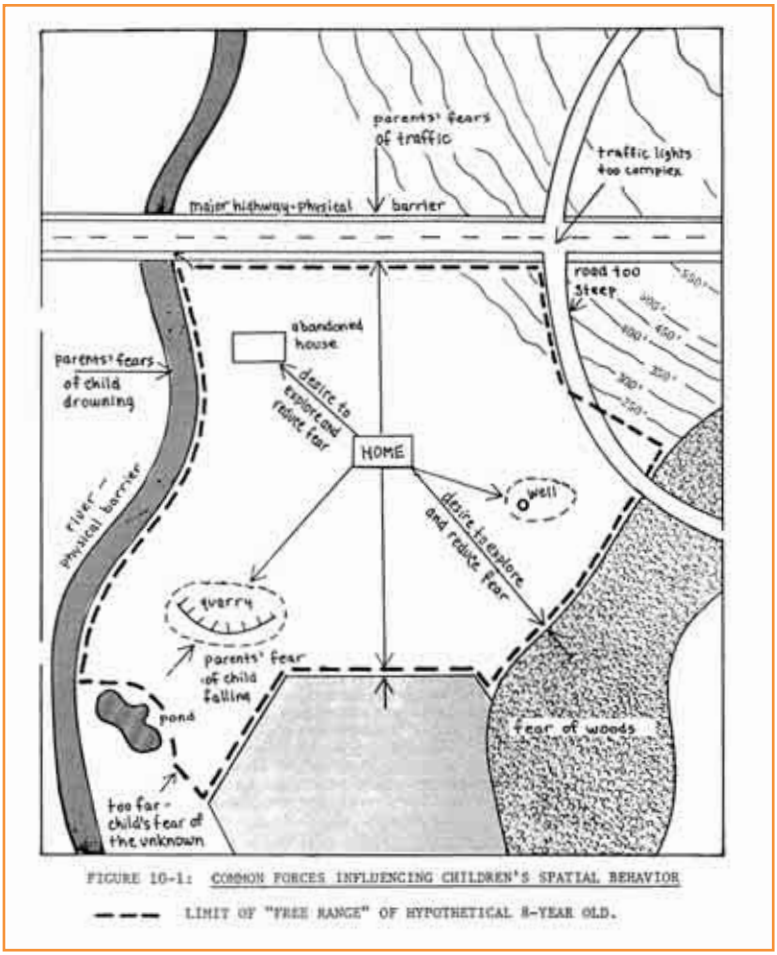

Figure 2 | *Children's experience of place – the first ten years. After Hart, 1979.*

Exploring the local environment

Most of us remember the place where we were brought up in some considerable detail and often recall it with fondness. These first impressions of the outside world stay with us throughout our lives and provide a rich source of experience. Authors such as Laurie Lee, Virginia Woolf, George Orwell and Marcell Proust recall their early memories with great sensitivity in their novels. Our sense of identity, it seems, derives in some part from the social and physical environment in which we spend our childhood.

The way children interact with their immediate surroundings is important not only for their psychological well-being, it also promotes their educational development. Many play activities involve rehearsing or re-enacting previous events and situations. Through imitation children are able to give full reign to invention and fantasy. Piaget argues that make-believe play allows children to assimilate knowledge and forms the basis of a child's thought even before it can speak. Certainly the opportunity to model and manipulate experiences seems to be an essential part of the learning process.

Several researchers have attempted to find out more about children's private geographies. The classic study was undertaken by Hart (1979) who made a detailed investigation of a New England township over a two-year period. Hart discovered that the children put a particularly high value on water features such as rivers, lakes and ponds. They also favoured trees for climbing and hiding games. The places they feared matched the archetypal scary places of children's literature – attics, cellars and abandoned buildings, and bedrooms and garages at night. Very few of the children selected places for their aesthetic qualities alone. Hart comments on the way children treasure informal routes and pathways which they often use as 'short-cuts' even when they are actually longer. Other researchers, too, remark on children's affinity for secret routes and alleyways. As they explore their surroundings children construct private geographies which meet their physical and emotional needs (Figure 2).

Further insight into children's thinking is provided by the names they invent for their favourite places. Matthews (1992) reports how, when drawing maps of suburban Coventry, children labelled a variety of local features. Examples included the 'Moth-hawk tree', the

Figure 3 *| Exploring their environment helps children develop their sense of attachment and identity. Photo: Diane Wright.*

'dump', 'Charlie's field' and the 'back alley'. Sometimes these personal names denote the activities that can be done in a place rather than its appearance, e.g. 'Roller-coaster place'. In her study of young children's environmental preferences Owens (2003) too found that many children prized the activities they could do in a place above all its other qualities. In one example she describes how a metal bar used for fastening a door was variously identified by reception class pupils as a meeting place, something you can lean and swing on and something you must not touch.

In thinking about pupils' perceptions of the environment it is important to recognise that their experience may be limited and not to make assumptions. For example, Owens (2003) discovered through discussion with reception class pupils that many of them had no idea that there was a field attached to their school. Similarly, there are adolescents living in London who have never travelled by bus or underground or ventured across the River Thames and those from the Channel ports have never been to mainland Europe.

At the same time children are naturally curious and inventive. They invest their surroundings with personal meaning and interpret it according to their needs. It is worth remembering in this context that the most intensively used play areas are often small patches of dirt rather than designated facilities. Children also need places where they simply loiter or day-dream (Figure 3). Edmund Gosse, the Victorian naturalist, is one of many authors who have left us with a description of their childhood pleasures:

> *By the side of the road, between the school and my home, there was a large horse pond. Here I created a maritime empire – islands, a seaboard with harbours, lighthouses, fortifications. My geographical inventiveness had its full swing. Sometimes, while I was creating, a cart would be driven roughly into the pond, shattering my ports with what was worse than a typhoon. But I immediately set to work, as soon as the cart was gone and the mud had settled, to tidy up my coastline again and scoop out anew my harbours* (Gosse, 1965, p. 136).

It is through transactions of this kind that children come to invest their environment with meaning. The attachment to places which we develop as adults is derived from these childhood interactions. We identify with our home area in lots of different ways. Some people support their local football team, others become involved with local history or trace their family tree. Historically people used to believe they belonged to the soil of a particular place in an organic and religious relationship. The Romans recognised the spirit or essence of a locality (its *genius loci*) by setting up shrines to local deities. Anthropologists have recorded similar beliefs among the original inhabitants of Australia and North and South America.

These studies remind us that the quality of an environment is a very complex issue. As well as quantifying physical and human processes, geographers seek to take account of subjective and personal responses. What a place is like is not simply a matter of fact. It depends equally on how we perceive it and what we feel about it. Today, concerns over personal security and the relentless growth of road traffic are serving to erode children's personal freedom and their links with the environment. In an authoritative and far-reaching study Hillman (1993) found that the number of unaccompanied activities undertaken by junior school pupils at weekends

had halved between 1971 and 1990, may affect emotional and social development. When children explore the environment they have opportunities to take initiatives, learn survival skills, develop a sense of adventure, gain self-esteem and accept responsibility for their actions. The physical activity also helps to keep them fit and healthy.

Restoring this richness to children's lives is a challenge which schools cannot expect to meet on their own. However, they can at least promote pupils' awareness and provide some form of environmental experience. Geographical fieldwork has a unique contribution to make to this process. On one level fieldwork can consist of environmental walks and simple data collection activities in and around the school buildings. It can also involve work in local streets and journeys to nearby places. In addition many schools organise some form of residential experience or school journey.

It may also be possible to make better use of the daily journey from home to school. In a study of 150 key stage 1 and Foundation Stage pupils, Large (2003) found that those who talked to an adult about their journey were much more aware of the route than those who did not, even if they travelled by car. Parental involvement was the crucial factor in turning children from passive participants to active learners. Equally, teachers can encourage pupils to engage with their surroundings by setting them challenges such as identifying the nearest post box or making a survey of front door colours.