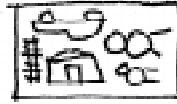


STUDYING
DEVELOPMENT IN
CHILDREN'S WORK

Maurice Barrett

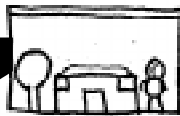
DRAWING



Random placements

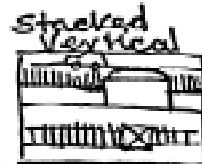
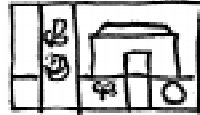
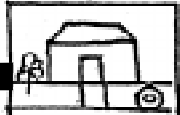


Random implied baseline



orthographic

Vertical.



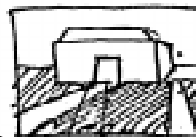
Oblique



Naive perspective



Pragmatic perspective.



Geometric perspective

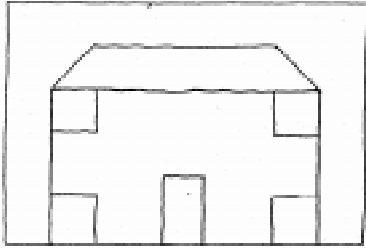
A study of how children draw objects in space

Teachers often overlook the fact that their classrooms can become the resource centre for their own research. Many researchers would be grateful for the opportunities offered by continuous working contact with a group of pupils between the ages of 5 and 18. Some teachers feel that all research has got to be 'the result of empirical studies using scientific controls to ensure objectivity' (Eisner, 1972). If the work is to be evaluated by academics then this belief is well founded, but consideration should be given to the classification and analysis of children's activities, on the basis of insight and accumulated experience. It may not enter the learned journal but it could create a firm basis upon which to develop new and more effective strategies in the classroom. It could also enliven the discussions that take place between teachers confronted with similar problems. Teachers should not be deterred from a close study of their work with children just because they are not trained to do so in one particular way. I am not diminishing the value of controlled research, but rather making the case for deeper enquiry by the teacher who is ideally placed, having invaluable knowledge and control of resources. The two methods can work hand in hand.

This approach was adopted in the study of 800 drawings done by pupils from 5- 18 in the London Borough of Redbridge 12 years ago. The work was produced in schools without any direct guidance from the teacher. The drawings were studied in terms of their developing differentiation. This covered the use of baselines, placement of doors and windows, handling of the sky and space above the house, depiction of smoke and chimneys, garages and outbuildings, street and garden furniture, handling of space in front of and behind the houses, portrayal of drainpipes, brick patterns, and wall patterns. There was no systematic categorisation and the results could not be put forward as objective research but it was possible through insight, observation, and discussion to reach some general conclusions which, in their turn, became the basis for discussion and comparison with the insights and observations of others. Eventually the differentiation became too complex to handle and the study focussed upon the ways that children develop drawing structures to represent objects in space.

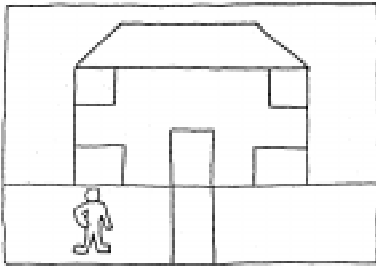


orthographic projection

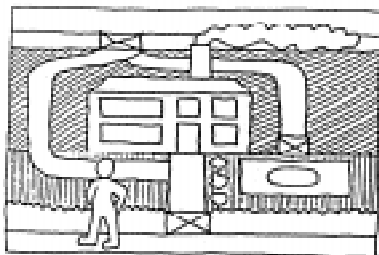


Initially children place objects in an arbitrary relationship to one another. Later the child places the house firmly on ‘the ground’ and the bottom of the paper is used -as a baseline. This is called “orthographic projection”

vertical projection



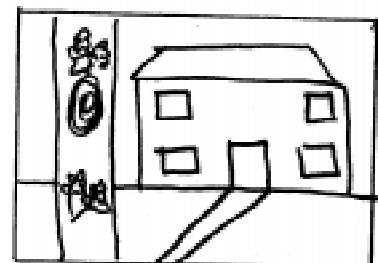
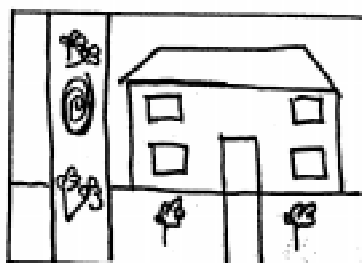
This enables the child to show things “standing up” in the vertical plane, like walls, people, trees, flowers and washing lines” but unable to show the garden and path in front of the house. As the perception of the environment becomes more complex the child needs to develop the means of showing things in the horizontal plain such as paths, pavements, lawns, table tops and ponds. In the process, each child will experiment to find an effective method.



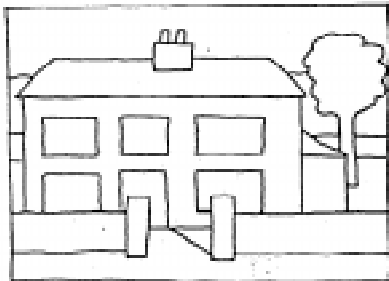
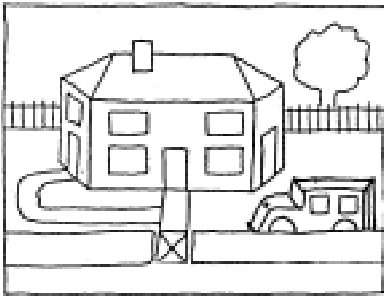
In most cases the problem is resolved by using, “vertical projection.” How the transition from orthographic to vertical projection comes about is complex. It can be determined by peer group example or through personal inventiveness but after a period of transition children will tend to use vertical projection in a variety of ways to fit their particular perception. The method is to represent objects standing vertically in side elevation and objects in the horizontal plane in plan view.

This solution to the problem of representing objects in space is open to widely varied application, particularly when coupled with over lapping and changes of scale. Children will commonly find this drawing structure sufficient for their needs for as long as five years before it becomes inadequate to deal with their increasingly complex perception of the environment. As they realise that objects have “sides” and need space in which to stand, problems and ambiguities begin to occur.

Do the vertical lines on the left of the image (below left) represent a tree with a branch and knot or a path with a weed and puddle? After a period of transition most children learn that the problem can be resolved by placing the path which goes into the depth of the picture at an oblique angle to the base. This differentiates effectively between the tree and the path.



oblique projection



This leads the child into all sorts of considerations about how to deal with space and form. The sides of the houses are 'bent round' so that they can be viewed with the front giving the impression of multiple-viewpoints where each part is drawn as if viewed from the best position. These effects can also be enhanced by changes of scale and overlapping.

It is worth noting at this point that only European based culture, post the early 15th Century, develop convergent perspective. All other developed cultures use the aforementioned drawing systems to deal with complex perceptions of space but without using the picture plane as the "fourth wall" of the contained space. Most children in our schools find the first three projections adequate to their needs. Those with more complex perceptions of space or confronted with complex problems will learn or be taught how to handle convergent perspective, either by rule of thumb, visual comparisons or through the application of formal geometric perspective. Teachers need to be able to recognise the methods and projections that children are using in order to be able to guide them appropriately through the range of possible drawing structures available to them.

The child then discovers that in order to represent roofs, bay windows, and staircases he needs to develop a more complex control of form beyond the simplicity of the oblique:

Some children realise that the representation of space in oblique projection can be enhanced by placing the oblique angles in a convergent relationship. This is often applied piecemeal and inconsistently between adjacent object. The use of convergent perspective can be controlled by direct reference to the objects and space within an imagined picture plane. The checking of angles against the horizontal and vertical coupled with comparative measurement of scale can make the image relate more effectively to the visual evidence. The rule of thumb method is commonly used for perceptual drawings and can be called pragmatic perspective.

Geometric perspective is based upon rules, which enable drawings to be checked against a logical framework. Architects and engineers use these conventions when dealing with precise information but they tend only to be used by artists as a reference for checking difficult spatial relationships. It is worth mentioning that these systems apply whether the work is based upon observation or imagination. In recent work done by Phil Tootell in Wanstead High School, it also seems to determine the child's response when copying from photographs.

The development of these drawing systems is not only sequential but also accumulative. The pupil (or artist) capable of using perspective will also use other systems depending upon the particular needs of the drawing problem. This opens up all sorts of possibilities for the teacher. Instead of relentlessly moving the pupil towards formal perspective, fostered by the child's wish to draw 'properly' and the teacher's sequential view of drawing, we could approach the pupil's drawing as existing within a range of possible solutions. The teacher would then be able to assist the pupil on the basis of where he is in the process of drawing instead of feeling compelled to orientate the pupil towards a universal scheme for drawing.

Adolescents want to learn to draw; Witkin calls it "the representational crisis". But no single approach to children's artistic development is going to contain the essential truth about every child or satisfy the view of every teacher. Evidence that can be studied is produced daily in the art room and the art teacher should take the opportunity of studying the work of children from all age ability groups.

There are many possibilities in this sort of teacher-based study, but too often the teachers are put off by demands from academics to justify their experience and insight by methods unrelated to the way they normally operate. They know that their knowledge of art is insightful and not based upon 'empirical studies using scientific controls' but they are often reluctant to turn this insight into a deeper study of their own and their pupils' work in art education.

The projections set out above also occur in the work of artists from different cultures and historic periods. If pupils are aware of this it can help them to appreciate the wide diversity of drawing systems in different forms of art. It can also help to validate their own efforts.

