

are combined, one with another, to produce simple abstract patterns. A circle is cut through by a cross, the corners of a square are joined by diagonal lines. This is the vital stage that precedes the very first pictorial representations. In the child this great breakthrough comes in the second half of the third year, or the beginning of the fourth. In the chimpanzee, it never comes. The young chimp manages to make fanpatterns, crosses and circles, and it can even achieve a 'marked circle', but it can go no further. It is particularly tantalising that the marked-circle motif is the immediate precursor of the earliest representation produced by the typical child. What happens is that a few lines or spots are placed inside the outline of the circle and then, as if by magic, a face stares back at the infant painter. There is a sudden flash of recognition. The phase of abstract experimentation, of pattern invention, is over. Now a new goal must be reached: the goal of perfected representation. New faces are made, better faces, with the eyes and mouth in the right place. Details are added-hair, ears, a nose, arms and legs. Other images are born-flowers, houses, animals, boats, cars. These are heights the young chimp can never, it seems, attain. After the peak has been reached-the circle made and its inside area marked-the animal continues to grow but its pictures do not. Perhaps one day a genius chimp will be found, but it seems unlikely.

For the child, the representational phase of graphic exploration now stretches out before it, but although it is the major area of discovery, the older abstract patterning influences still make themselves felt, especially between the ages of five and eight. During this period particularly attractive paintings are produced because they are based on the solid grounding

of the abstract-shape phase. The representationimages are still at a very simple stage of differentiation and they combine appealingly with the confident, well-established shape-and-pattern arrangements.

The process by which the dot-filled circle grows into an accurate full-length portrait is an intriguing one. 'The discovery that it represents a face does not lead to an overnight success in perfecting the process. This