Pictorial recognition and teaching the blind to draw

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The author wished to discover how the blind mentally envisage three-dimensional form and if any connection existed between their conceptions and those of sighted persons. One question was if conventional orthographic presentations conveyed anything to the blind, or would three-dimensional representations be more meaningful? If the latter, to what extent could this system of drawing be utilised and would new doors be opened for the blind? In the long term, it was realised that many human factors were involved in promoting an entirely new concept in drawing technique.

Through tests and experiments psychologists have long endeavoured to define blind persons' powers of visualisation. It is well known that through touch, vibrations, textures, sounds, and smells, blind persons can develop extraordinary skill in recognising shapes, surfaces, planes, and direction, both in solid form and in space.

By comparison with the sighted, the blind can achieve only limited mental configurations in a pictorial sense; greater accuracy is observed when they are in a familiar situation or when objects can be encompassed by touch.

Without having seen three-dimensional objects depicted in two-dimensional picture form, mental conceptions vary enormously according to individual imagination and power of retention. Transposing mental impressions into visual form by drawing usually presents problems.

Allowing for the lack of dexterity in the handling of pens, pencils, and the like, the blind invariably attempt to produce drawings in much the same way as do very young sighted children. Objects are usually depicted in a single frontal plane, with horizontal surfaces placed above in a vertical position (Figure 1). Verbal descriptions relate to three-dimensional concepts as, indeed, do descriptions of their dreams.

Picture book for the blind

Numerous tactile maps, charts, and line illustrations have been produced as aids in the construction of mental pictures. In tests with three-dimensional line illustrations of common objects, it was found that by tracing contours by touch and using an element of elimination combined with simple clues (used outside the house, for example), recognition was possible. Repeating this exercise at intervals, using a number of illustrations in picture book form (Figure 2), increased powers of comprehension and retention.

Further research established that it would be futile to institute a method of drawing which would be alien to the blind persons' mental approach to the subject. All possible methods of drawing were examined to arrive at one which had
Figure 1. Comparison of children's drawings (top sighted; below blind).

Figure 2. Examples from raised line picture book.