Drawing conclusions from children's art

ESTHER BURKITT *on whether those pictures stuck to the fridge are really a window to a child's mind.*

IMAGINE a child runs up to you full of excitement, thrusting a drawing into your hands. You see two giant figures, coloured in murky shades of browns and greys, apparently fighting. Would you conclude that the child is really trying to show you that they are upset about the figures in their drawing? Or could it be that this child loves the colours they used, and feels so positively about the people in the picture that their size has been exaggerated out of all proportion?

When we look at a child's drawing we may see a collection of scribbles, or a clear representation of reality. We may simply enjoy the range of shapes and colours before us, or we may look for personal meaning to the child artist or to ourselves. And meaning may or may not be there: children's drawings fulfil a variety of purposes (Thomas & Silk, 1990). Children draw to decorate a wall or simply to bring pleasure to themselves and the viewer; but they also draw to express feelings, to show others how they feel about people and objects in their lives.

At least by the late 1930s, as seen in the work of Lowenfeld (1939, 1947), some researchers were coming round to the idea that children's drawings were not just representations from life that varied in realism (see Luquet, 1927) or served as

measures of intelligence (Goodenough, 1926). The drawing of a human figure, in particular, began to be regarded as a way in which children expressed something about themselves. This 'body-image' assumption laid the base of formal tests of the child's personality (The Machover Draw-a-Person Test: Machover, 1951) and current emotional state (Koppitz, 1968). Other tests, such as the Kinetic Family Drawing Test and the House-Tree-Person test, claimed to measure how children felt about the topics in the drawing and their wider environment. Unfortunately, research studies assessing the reliability and validity of these tests fell short of what was needed for them to be trusted (Swenson, 1968; Thomas & Jolley, 1998).

However, recent research is beginning to provide evidence that children's feelings do come out in their drawings. Children may not display their feelings in consistent and reliable ways in their drawings (a possibility that diagnostic tests rely on), but this doesn't mean that they don't draw their feelings at all. Has the research evidence on the diagnostic tests led to us throwing the baby out with the bathwater?

Clearly, as with any symbol, the associated meaning may vary greatly depending on who created and who interpreted the sign. However, by focusing on particular drawing properties, such as drawing size and colour, research is

beginning to show that children's feelings about drawing figures can be investigated systematically. But there are also factors that need to be borne in mind before jumping to a conclusion about the emotional meaning of children's drawings.

Figure size

There is a long research tradition on whether children show how they feel about the topics they draw through alterations in the size of significant figures (e.g. Craddick, 1961; Hammer, 1997; Machover, 1949). However, some of the research has neglected to find out how the children feel about the topics independently from the drawings themselves, and studies in the area have used varying methodologies that cannot be easily compared. There has been some confusion about exactly what aspect of emotion children convey when they draw a large figure or a small figure, and what mechanisms influence these changes in scale (Thomas & Jolley, 1998).

Recent research is beginning to show that if a child regards a figure as happy and feels positively towards that figure, or indeed regards the figure as socially important, they will generally increase the size relative to a figure towards which they hold neutral or negative affect, or which they regard as less socially salient (Aronsson & Andersson, 1996; Burkitt *et al*., 2003b, 2004). This may be because

children have learnt to depict positive topics in a large scale or because they are trying to increase the pleasantness of the drawn topic. However, we do know this trend is not dependent on children simply increasing the size of their drawings to include more details (Burkitt *et al.*, 2004).

Children do not show negative feelings towards topics in quite as reliable a way. There is mixed evidence to suggest that an unpleasant or sad figure will be reduced in size (Burkitt *et al.*, 2003a, 2003b; Fox & Thomas, 1990; Jolley, 1995; Jolley & Vulic-Prtoric, 2001; Thomas *et al.*, 1989). Practitioners can be reasonably confident to conclude that children tend to show positive affect towards happy or nice topics by scaling them up compared with neutral or negative figures, yet caution is urged when inferring negative feelings on the basis of drawing size.

Colour

Colour–emotion associations have been well documented (Alschuler & Hattwick, 1947; Arnheim, 1956; Golomb, 1992; Zentner, 2001), but very little has been done to assess the personal meaning of colours in relation to drawing production. Children's drawings are often viewed as cheerful and positive when figures are depicted in bright, bold primary and secondary colours. Conversely, when a child draws in black or dark purples and browns, it is tempting to conclude that the child may be personally distressed about the scenes they are drawing. Such premises still guide the use of chromatic and non-chromatic assessments of personality and emotional states (Hammer, 1997).

Whilst these notions may be true for some children, we know that when children are asked to depict figures they feel positively or negatively towards, they select colours in relation not only to the emotional valence of the drawing topics, but to how they feel about the colours themselves (Burkitt *et al.*, 2003b, 2004; Nelson *et al.*, 1971). For example, a child who draws a person using dark purple is not necessarily revealing a negative attitude towards them; if that child favours dark purple they could be showing how much they like the figure and the colour they have used. Figure 1 shows drawings of a nicely, neutrally and a nastily described man drawn by the same six-year-old child. The child's colour preferences, which were taken into account in a counterbalanced testing session (see Burkitt *et al.*, 2004), revealed that the child liked the colour used for the nice man more than the colour used for the baseline and nasty man.

The use of some colours for the depiction of liked or disliked topics seems to occur across cultures, whereas other colours are used very differently between educational and cultural groups. This is hardly surprising if we take the view that children learn conventional colour–affect rules from important cultural influences: for example that the baddies wear black. In fact, the use of darker colours to depict topics that the child artist feels negatively about seems to be fairly consistent across varying educational and cultural groups.

Brown and black feature highly in negative dream scenes depicted by Native American children (Nelson *et al.*, 1971), in Finnish and British children's drawings of nasty topics, and in Israeli children's depictions of negative events (Burkitt & Tala, 2004; Mumcuoglu, 1991).

In a comparison of children who have attended only mainstream schools and children who have experienced only Steiner schooling (Burkitt *et al.*, 2003b, in press), both groups used a wide range of colours to present negative figures. However, only the Steiner children used yellow to convey negativity as well as positivity. This is an unusual association and not generally found with mainstream populations. Figure 2 (see over) shows a drawing by a child attending a Steiner school. The figure appears to be of a positive character that might be interpreted to show that the child feels happy about the figure – that is until it is known that this child was representing a sad man using a colour the child disliked.

So whilst there is consistency with some emotion associations in drawing across national and educational groups, there is also tremendous variety. Researchers and practitioners clearly need to take such factors into account before assuming an emotional connotation regardless of educational and cultural background.

Future directions

A note of caution is necessary before concluding. Because much of the above

FIGURE 1 Drawings by a six-year-old

research has used an experimental paradigm, where children's temporary affect is manipulated through drawing instructions (e.g. 'draw someone you don't like'), independent evidence of children's feelings towards the drawn topics needs to be taken into account. In the majority, each drawing strategy (size, colour, placement) is assessed individually rather than the drawing being examined as a whole (Burkitt *et al.*, 2004). For research to shed more light on which drawing properties are influenced by children's feelings, future systematic research could include naturally occurring categories of drawing topics towards which children hold stronger, pre-existing affect (parents, favoured or disliked peers, etc.)

An additional key question for future research is whether children are conveying their affect towards the topics they draw as a result of a deliberate, intentional act of communication. Drawings are determined in complex ways: they can be used as a tool for facilitating communication or to aid assessment in their own right, but many factors need to be accounted for before reasonable and accurate conclusions can be drawn. Children's drawings may just be a matter of adherence to pictorial conventions and cultural rules; this possibility at least requires more research in order to understand how much a child is communicating through their work.

FIGURE 2 Drawing by a child attending a Steiner school

To echo early researchers in the field, to infer a child's affect on the basis of a drawing alone is unwise (Koppitz, 1968). It matters which drawn property is being interpreted for emotional meaning; it may matter which educational and cultural background the child originates from; it matters what kind of drawing task a child is engaged in; it is important to ascertain children's colour preferences; and it is crucial to take drawing ability into account to know whether large or small figures are the result of planning problems or result from an affective dimension.

Diagnostic tests rely on a direct and consistent relationship between the graphic feature (or the whole drawing) and the child's emotional feeling, yet research has failed to find the necessary reliability of this relationship when attempting to validate the tests. But this does not mean that emotional expression is not an influence on children's drawings. It just seems that despite nearly 80 years of research, the factors that shape children's drawings of emotional information remain elusive. This may be due to the view that some diagnostic tests are unreliable, therefore creating the impression that a relationship between drawings and affect is unreliable. Or this may be due to the imprecision of research in defining the type of affect under investigation. Either way, the precise meaning of that fridge art looks set to elude us for some time yet.

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References

Alschuler, R. & Hattwick, L. (1947). *Painting and personality.* Chicago: University of Chicago Press.

Arnheim, R. (1956). *Art and visual perception: A psychology of the creative eye.* London: Faber & Faber.

Aronsson, K. & Andersson, S. (1996). Social scaling in children's drawings of classroom life: A cultural comparative analysis of children's drawings in Africa and Sweden. *British Journal of Developmental Psychology, 14,* 301–314.

Burkitt, E., Barrett, M. & Davis, A. (2003a). The effect of affective characterisations on the size of children's drawings. *British Journal of Developmental Psychology, 21,* 565–584.

Burkitt, E., Barrett, M. & Davis, A. (2003b). The effect of affective characterisations on the use of colour within children's drawings. *Journal of Child Psychology and Psychiatry, 44,* 445–455.

Burkitt, E., Barrett, M. & Davis, A. (2004). The effect of affective characterizations on the use of size and colour in drawings produced by children in the absence of a model. *Educational Psychology, 24*(3), 315–344.

Burkitt, E., Barrett, M. & Davis, A. (in press). The role of education on children's use of colour and size in drawings of affectively characterized figures. *International Journal of Art and Design Education.*

Burkitt, E. & Tala, K. (2004). *The role of culture in children's drawings of emotionally salient figures.* Manuscript submitted for publication.

Craddick, R. (1961). Size of Santa Claus drawings as a function of time before and after Christmas. *Journal of Psychological Studies, 12,* 121–125.

Fox, T. & Thomas, G. (1990). Children's drawings of an anxiety-eliciting topic: Effect on size of the drawing. *British Journal of Clinical Psychology, 29,* 71–81.

Golomb, C. (1992). *The child's creation of a pictorial world.* Berkeley, CA: University of California Press.

Goodenough, F.L. (1926). *The measurement of intelligence by drawings.* New York: World Books.

Hammer, E.F. (1997). *Advances in projective drawing interpretation.* Springfield, IL: C.C. Thomas.

Jolley, R.P. (1995). *Children's production and perception of visual metaphors for mood and emotion in line drawings and in art.* Unpublished doctoral thesis. University of Birmingham.

Jolley, R.P. & Vulic-Prtoric, A. (2001). Croatian children's experience of war is not reflected in the size and placement of emotive topics in their drawings. *British Journal of Clinical Psychology, 40,* 107–110.

Koppitz, E.M. (1968). *Psychological evaluation of children's human figure drawings.* London: Grune and Stratton.

Lowenfeld, V. (1939). *The nature of creative activity.* New York: Macmillan.

Lowenfield, V. (1947). *Creative and mental growth.* New York: Macmillan.

Luquet, G.H. (1927). *Le dessin enfantin.* Paris: Alcan.

Machover, K. (1949). *Personality projection in the drawings of the human figure.* Springfield, IL: C.C. Thomas.

Mumcuoglu, K.Y. (1991). Head lice in drawings of kindergarten children. *Israel Journal of Psychiatry and Related Sciences, 28,* 25–32.

Nelson, T.M., Allan, D.K. & Nelson, J. (1971). Cultural differences in the use of color in northwest Canada. *International Journal of Psychology, 6,* 283–292.

Swenson, C.H. (1968). Empirical evaluations of human figure drawings: 1857–1966. *Psychological Bulletin, 70,* 20–44.

Thomas, G.V., Chaigne, E. & Fox, T.J. (1989). Children's drawings of topics differing in significance: Effects on size of drawing. *British Journal of Developmental Psychology, 7,* 321–331.

Thomas, G.V. & Jolley, R.P. (1998). Drawing conclusions: A re-examination of empirical and conceptual bases for psychological evaluation of children from their drawings. *British Journal of Clinical Psychology, 37,* 127–139.

Thomas, G. & Silk, A. (1990). *An introduction to the psychology of children's drawings.* Hemel Hempstead: Harvester Wheatsheaf.

Zentner, M.R. (2001). Preferences for colours and colour–emotion combinations in early childhood. *Developmental Science, 4,* 389–398.