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The CID Lens
Looking at Children's Drawings Using Content, Interpretive, and Developmental Methods

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COMMON GROUND

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Abstract: For many years, researchers have tried to comprehend the meaning of children's drawings (Kindler, 2010). They assumed that children express their emotions and their personality in their pictures, including conscious and unconscious fears, hopes, trauma, conflicts, and fantasies, opening a window to a child's mind and soul (Cox, 1992; Di Leo, 1983; Kavanagh, 1998; Kolbe, 2005; Krenz, 2004; Malchiodi, 1998). However, as Rubin (1984) observed: "deciphering a child's symbolic art messages is a complex, shifting and variable one" (74). The aim of this research was to critically analyse relevant interpretations of children's art, to find commonalities in various methods and to determine their effectiveness in particular for the analysis of children's drawings. Further, it aimed to find a workable method for educators to interpret children's drawings. The research employed a qualitative approach, using comparative document analysis to critically examine methods for analysing children's drawings. Several methods of analysing children's drawings have been suggested, including looking at drawings in relation to a child's development, classifying the content of the artworks, and trying to understand children's art from various other perspectives and interpretations. This resulted in the identification of three method categories for analysing children's art: developmental analysis, content analysis, and interpretive analysis, with three approaches from each method selected and trialled with children's drawings. The research question was: "How can we, as educators, make sense of children's drawings?" Findings from this study demonstrate a need to move from monopolistic to holistic methods of interpreting children's drawings, from a content-dominated analysis to one that includes interpretive and developmental methods. By combining existing methods into an easier-to-apply form, teachers will be better equipped to take on the task of interpreting children's drawings. The content-interpretive-developmental (CID) method of analysing children's drawings was created as an outcome of this study, with suggestions for approaches within this method to get a rich understanding. Further, this research suggests that children's art provides great insight into children's learning and development; and that children need to be guided beyond stereotypical drawing. The arts, often overlooked in schools, need to be seen as important components of curriculum, as they offer great benefits for the developing child. Educators would be interested in the meanings and messages of the child's artwork as a way of understanding the whole child and as a way to support the child's learning in an individual and personalised way.

Keywords: Interpreting Children's Drawings, Content Analysis, Interpretive Analysis, Developmental Analysis

Introduction

Works of art are mere things until we begin to careful perceive and interpret them- then they become alive and enliven us as we reflect on, wonder about, and respond to them (Barrett 2003 cited in Day and Hurwitz 2012, 197).

Child art has not always had the attention it has received during the last 100 years. Societies in the Western world changed considerably in the past century and with it came an evolution of ideas about childhood and education (Kouvou 2005). The significance of childhood as a separate stage in a person's life became important only in the 20th century (Cleverley and Phillips 1986; Sorin 2005). At the same time an appreciation of child art developed. Changing perceptions of art equally brought an appreciation of the aesthetics of children's artwork (Leeds 1989). The change in attitude towards children produced various theories and views of childhood, which have been challenged over time by philosophers, psychologists and educators (Day and Hurwitz 2012; Golomb 2004; Malchiodi 1998). From insights, observations and research, theories and methods have been generated to understand childhood and especially child art.

COMMON GROUND

Researchers have tried to comprehend the importance and meaning of children's drawings (Kindler 2010). They have assumed that children express their emotions and personality through their pictures; including conscious and unconscious fears, hopes, trauma, conflicts and fantasies; opening a window to a child's mind and soul (Cox 1992; Di Leo 1983; Kavanagh 1998; Kolbe 2005; Malchiodi 1998; Krenz 2004). However, as Rubin (1984) observed: "deciphering a child's symbolic art messages is a complex, shifting and variable one" (74) but a process that offers educators deeper insight into the learning and development of young children.

Several approaches for analysing children's drawings have been suggested by researchers, based on their experiences and observations. These include: looking at drawings in relation to a child's development, classifying the content of drawings and trying to understand children's drawings from various other perspectives. Following critical examination, this resulted in the collation of three approaches for analysing children's drawings: Developmental Analysis, Content Analysis and Interpretive Analysis. For this research, three methods from each approach were chosen to be trialled on a series of children's drawings.

Literature Review

An interest in child-art emerged in the late 19th century, followed by efforts to find frameworks or methods to effectively describe and interpret children's visual representations (Leeds 1989). Different views evolved about how to 'read' children's artwork, particularly their drawings (Anning and Ring 2004; Day and Hurwitz 2012; Kavanagh 1998; Golomb 2004; Koster 2001; Leeds 1989; Malchiodi 1998).

Developmental psychology has concentrated on stages children progress through from birth to adolescence. Different models showed the researchers' observations and findings, relating to special features a child's drawing might demonstrate at a particular time of development. These insights resulted in the labelling of stages in age groups and included 'definite' expectations of what can be found in children's drawings according to their age (Lucquet 1913, in Anning and Ring, 2004; Lowenfeld and Brittain 1987, in Koster, 2001; Dyson 1992; Malchiodi 1998).

Developmental Analysis was explored and critiqued as the 'first in line' of approaches to analyse child art. Starting with Lucquet's (1913) observation of his daughter's graphic development to the recent publication by Day and Hurwitz (2012), researchers have tried to combine specific stages of cognitive development with children's developing graphic ability.

While Developmental Analysis was first identified by Luquet in 1913, it also appeared in Piaget's (1920) work (Anning & Ring, 2004) and was extended by art educators such as Kellogg and O'Dell (1967) and Loewenfeld and Brittain (1987). This approach has been endorsed by others, including: Gardner (1980); Dyson (1992); Kindler and Darras (1997); Malchiodi (1998); Morley (1975); Schirrmacher (2002); Golomb (2004); Folley and Mullis (2008); and Day and Hurwitz (2012). This research examined developmental stage theories of the above 13 authors, sifting through different views and comparing opinions on the approach's suitability to children's drawings analysis.

When psychology incorporated art-therapy, late in the 1950s, the attention of researchers shifted to the interpretation of child-art symbols and their different meanings in the therapeutic process (Day & Hurwitz, 2012; Malchiodi, 1998). Art therapists and psychologists created Content Analysis drawing tests in which 'content', or items in a drawing, were defined, counted/scored and checked against pre-conceived tables of what could be expected (e.g. eyes, ears, body-parts included) and what inferences might be drawn from unusual expressions (e.g. omitted arms or legs, excessive shading). Psychologists used these tests to determine levels of intelligence, character traits and overall cognitive development of a child, while art therapists looked for indications of emotional disturbance (Di Leo 1983; Cox 1997; Golomb 1992, 2004; Rubin 1984; Thomas and Jolley 1998). It was assumed that the drawn human figure, house or tree for example, is a projection of the child's 'Self' or that family drawings are 'mirrors' of the

relationships in the child's family (Di Leo 1983; Cox 1997; Golomb 1992, 2004; Harris 1963; Lewis and Greene, 1983; Rubin 1983).

Although the Content Analysis approach is mainly used in the medical profession by psychologists and art therapists, it has also been found to be relevant in the area of child-centred, scientific research; such as when testing for children's understanding and concern about the future of the environment (Barraza 1999; Kalvaitis and Monhardt, 2012; Sorin and Gordon, 2010). For example, Sorin and Gordon (2010) used Content Analysis in their interpretation of children's perception of the tropical landscape (2010). Drawings were scored for categories that emerged from the counting of objects, such as trees, houses, fences, etc., present in children's drawings about their environments.

As with the Developmental methods, this research investigated and compared 13 Content Analyses methods devised by various researchers (Barraza 1999; Brumbach 1977 in Di Leo, 1983; Deaver 2009; Di Leo 1983; Golomb 1992; Goodenough 1926, Harris 1963, Koppitz 1968, Naglieri 1988 in Cox 1997; Koch 1949, in Di Leo, 1983; Koppitz 1968; Machover 1949; Malchiodi 1998; Silver 2001; Sorin and Gordon 2010; Winnicott, 1971, in Malchiodi, 1998) and examined the relevance of this approach to the analysis of children's drawings.

In more recent years, the approach of Interpretive Analysis has been advocated, particularly as educational researchers have looked at alternative ways of interpreting children's drawings (Anderson 2000; Binder 2003, 2011; Binder & Kotsopoulos 2011; Golomb 2004). Interpretive Analysis is based on the assumption that children's drawings are displays of emotions, opening a window to the child's 'soul'; similar to an 'open diary' (Krenz 2004). This view is critiqued by Thomas and Jolly (1998) as being based on unconscious processes that strongly influence the researcher as theorized by psychoanalysts. Vandergrift, Platzner, Hannigan, Dresang, Lewis, Brizendine and Satchell (2000) express a similar view. They state that analyzing a drawing opens "multiple possibilities of interpretation", as many different elements in a drawing could influence the researcher's perception, such as Western-held colour symbolism (Harris 1963). However, Interpretive Analysis is said to be based on careful observations and "reflective thought" (Hansum-Ketchum 2004, 57).

Individual researchers have focused on different aspects of children's drawings. Day and Hurwitz (2012), along with Burkitt, Barrett and Davis (2004); Di Leo (1983); Golomb (1992, 2004); Kellogg and O'Dell (1967); Leigh (2010); and Malchiodi (1998) have taken into consideration the way elements of design are utilised and how choice of colour has influenced the child's composition. Some researchers have asked for the child's opinion (Bonoti and Metallidou 2010; Golomb 2004; Potter and Edens 2003), or analysed emerging literacies (Binder 2003). Further, researchers have looked at narratives, observing children while drawing and recording comments or texts that might accompany a picture (Bamford 2001; Binder 2003; Binder and Kotsopoulos 2011; Hopperstad 2010; Kendrick and McKay 2004; Kindler and Darras 1997; Schatz-Blackrose and Schatz 2010; Wright 2010). Another interpretation was based on spiritual elements in a child's drawing (Binder 2011; Bone 2008a; Malchiodi 1998; Roehlkepartain, Benson, King and Wagener 2006; Rollins 2005). While Wright (2007) recommends looking for themes in a child's drawings, other researchers have suggested using intuitive analysis for the interpretation of children's drawings; to view artwork as "mystifying" (Malchiodi, 1998, 19) or see it "with the eyes of the child" (Binder 2003, 14). Some suggest taking time between analyses, to wait for important insights (Anderson 2000; Binder 2003; Di Leo 1983; Golomb 2004; Hopperstad 2010; Kolbe 2005; Sheridan 2002; Wright 2007).

Anderson (2000) promotes the use of intuitive inquiry; warning, however, of a "dangerous attitude" of starting with pre-conceived ideas and overconfidence in analyzing data before going through a process of maturation (incubation) of insights (38-39). She advises researchers to let impressions and data settle to "allow non-linear, right brain activity to function more openly and creatively" and to wait for "unexpected insights" (Ibid), when analyzing a drawing. This allows us to 'grasp' the process of the "transformative experience" the child has expressed in the

drawing (Ibid, 31). Intuitive analysis is strongly recommended by Kolbe (2005). She states that "a sort of kaleidoscopic vision of [the child's] drawing emerges [because] something that involves hand, head and heart, deserves to be looked at from more than one angle" (2).

Methodology

The aim of the research was to critically analyse relevant interpretations of child art: to find commonalities in various methods and to determine their effectiveness in the analysis of children's drawings. Further, it aimed to find normative keys for the interpretation of children's drawings to help educators to make sense. By trialling selected methods, based on artistic development, content of the drawings and other interpretations (such as elements of design, colour or spiritual elements) this research sought to find solutions to the research question, *"How can we, as educators, make sense of children's drawings?"*

The research employed a Qualitative approach, using Comparative Document Analysis to critically examine methods for analysing children's drawings. From this critique, three approaches were identified and from each approach, three methods were selected and trialled on seven children's drawings. Based on these trials, the CID (Content, Interpretive, Developmental) method for educators to make sense of children's drawings is recommended.

Selection of Methods

From each of the three approaches—Developmental, Content and Interpretive—three methods were selected to be trialled with seven children's drawings. Each of these methods is described below.

Developmental Analysis

For Developmental Analysis, methods by Schirrmacher (2002); Golomb (2004) and Day and Hurwitz (2012) were chosen to be trialled. Schirrmacher's (2002) 'Model of Approximate Growth' incorporates the theories of Kellogg and O'Dell (1967) and Lowenfeld and Brittain (1987) into his thesis of developmental stages of children's drawings. Schirrmacher (2002) indicated that he wanted to develop a workable sequence as levels or stages in these theories are "overlapping and ages are approximate" (Ibid 128). He suggests the following stages: Manipulating the Media: (one to two years); then 'Making Shapes': (two to four years); 'Pictorial Art' (four to five years) the child's drawing is becoming recognizable to others; 'Realistic' (five to eight years) the child strives for photographic realism. According to Schirrmacher (2002), the last stage includes the 15 to 25 year olds where new abilities are discovered and developed; creative projects are planned, completed and evaluated. A decision is made to continue with art or forego art altogether. Schirrmacher points to Gardner (1980) who asserted that there is an U-shaped development observable in adults because they might abandon art in Middle Childhood, but come back to artistic expression in later life (Schirrmacher, 2002).

It was felt that the inclusion of researchers who worked directly with children (Kellogg and O'Dell) as well as art-educators (Lowenfeld and Brittain) would be appropriate to this research, which strived to provide educators with a working method for making sense of children's drawings.

Golomb's (2004) 'Model of Developmentally Planned Composition' is based on her theory about how 'elements of composition' in children's drawings are linked to their developing abilities to plan a design or a composition. Golomb states that during the first years [two ½ - four ½ years] children arrange items by mere proximity (Ibid 171-174), then children make deliberate use of symmetry: drawings are visually more pleasing and better balanced [four -seven years], careful planners might decide in advance how to compose their pictures (Ibid 181). Seven to nine year olds show increasing differentiation in the number and types of figures they include in their

drawings (Ibid 176-178). Nine to twelve year old children may use grouping principles which can increase the significance of figures, suggesting a relationship and enhancing the appeal of the drawing (Ibid 176-182).

Golomb reports that "the coordination of all elements that comprise a drawing makes great demands on the cognitive planning capacities of a child [and requires] an intuitive understanding" (Ibid 170), therefore the child must develop knowledge of how to plan a composition; rather like "learning the tricks of a trade" (Golomb, as cited in Day and Hurwitz 2012, 47). The method suggested by Golomb affirms that compositional ability is continuously progressing in the developing child: "performance, planning, inspecting, deciding are all part of the dialogue between what the eye sees, the mind constructs, and the hand creates" (Ibid 187), therefore a composition means organizing the 'elements of design' into a coherent structure (Ibid 188). Golomb states that "compositional development [in 'normal' children] peaks at age nine" (Ibid 289). This method was chosen as it presents a different approach to Developmental Analysis by concentrating on a child's design capability.

Day and Hurwitz's (2012) 'Model of Three Stage Artistic Development' gives detailed information about the different stages of children's pictorial expressions. This includes the 'Manipulative stage' (two – five years); by scribbling an infant makes "marks on the world". 'Symbol-making stage' (six- nine years); children develop symbols which they apply with increased precision. Then follows the 'Pre-adolescent stage'. There is wide variation in maturity and intellect. Children explore composition, re-presentation, and also technical aspects in their artwork; it allows personal control from beginning to completion. Development in art could come to an end because children at this level are socially aware and very sensitive to peer opinion (Day & Hurwitz, 2012, 54-56). Day and Hurwitz's method was chosen as it includes a wide variety of possible 'symbols' seen at the three different stages.

Schirrmacher (2002) states that stages in art development are approximate and overlapping; not definite. He observes five stages. They reach from 'what children know and not what they see' to finally realistic or photographic art expression. Golomb (2004) discerns four stages of art development. Concerning the model of developmentally planned composition, Golomb concentrates mainly on design elements of symmetry, grouping or alignment of shapes to determine stages of child art development. She also highlights the increased introduction of different objects as well as the differentiation of figures as determinants of stages. Day and Hurwitz (2012) note three stages of artistic development. They speak of a 'visual vocabulary', related to Kindler's research (1997), that children develop in the early years, which is expressed in a graphic language of symbols. Children are searching for personal symbols and create "equivalents rather than replicas of their subjects" (Day& Hurwitz, 2012, 47). By experimentation children expand their knowledge and "learn the tricks of the trade" (Ibid).

Schirrmacher (2002), Golomb (2004), and Day and Hurwitz (2012) agree on stages of art development, which correspond to cognitive and psychological development in the child. All three researchers state that these stages are of approximate times only and might be overlapping, moving forward or regressing, depending on influences children experience from their own development, or from socio-cultural influences. Schirrmacher (2002) notes that towards the end of childhood, children develop photographic realism in their art work; while Golomb states that children develop design elements which can then be advanced towards a complete composition. Day and Hurwitz (2012) suggest helping children develop their own graphic language of symbols during the pre-adolescent stage to "master technical and expressive conventions" which will enable children to take personal control over their art work from beginning to end (55).

These seemingly different outcomes of art development still show an agreement on overall skill development in cognition, thinking and artistic expression. Consequently it can be stated that children develop proficiency in visual representation as they mature (Day & Hurwitz, 2012).

Content Analysis

For Content Analysis, methods by Di Leo (1983); Sorin and Gordon (2010); and Deaver (2009) were chosen. Di Leo's (1983) **'**Kinetic Family Drawings' (K-F-D) are based on Burns and Kaufmann's (1970) method (in Di Leo, 1983), extending the approach with the inclusion of more symbolic interpretations of details in a drawing that might show underlying emotional difficulties experienced by the child. He surmises that "a 'normal' child...progresses from primary to secondary thought processes, from irrationality to logic, from egocentricity to objectivity, from pleasure to reality principle" (Ibid, 189-190). Di Leo believes the K-F-D to be a "valuable projective technique" (1983, 74). He suggests, asking the child first to draw his family, as this is a 'golden opportunity' to see if the child includes the 'Self' in the drawing. He maintains that drawings are only part of the assessment for disturbed family relations. Di Leo points out that the 'holistic approach' to children's drawings is more conclusive than the "atomistic, item by item" evaluation because "the integrated whole is more than the sum of its parts" (Ibid, 77), echoing the views of 'Gestalt' theory. This method was examined to find interpretations of details in a child's drawing that might be missed by purely looking at objects in it.

The 'Postcard-Approach' (Sorin and Gordon 2010) combines Content Analysis with some of the methods categorised as Interpretive Analysis. It looks for the presence of specific items in a drawing, such as trees and houses, and counts how many times these items are included. Further, it examines how elements of design, such as line, colour and shape are used, and seeks to determine the mood and emotional content of the drawing. This method recommends a story, written or dictated, by the child to supply additional data. This approach adds a further perspective to simply scoring a drawing for content.

Finally, the "Human Figure Drawing Test" was devised by Deaver (2009) as a scoring system for analysing children's drawings to establish normative data for the artistic development of children. She modified the "Formal Elements Art Therapy Scales" (FEATS) scoring tables developed for adults by Gantt and Gabone (1998),

to score the drawings of second and fourth Graders. Five scoring tables were developed for 1.Prominence of colour; 2. Colour fit; 3.Space; 4. Developmental level and 5. Details of objects and environment (Ibid, 7-8). Deaver (2009) does not attempt to interpret scoring results, nor is she looking for hidden symbolic meaning, but suggests that scoring results "simply reflect the amount of each measured variable in each drawing" (7). This test was chosen because scoring results from the age groups in Deaver's research could be compared to the age group of the 4- 6 year olds' drawings under analysis for the purpose of this study.

Interpretive Analysis

For Interpretive Analysis, methods by Lewis and Greene (1983), Rose (2007), Wright (2010), Binder (2003, 2011), Binder and Kotsopoulos (2011), Bone (2008a), and Anderson (2000) were chosen.

Lewis and Greene's (1983) research resulted in a detailed table, with particular meanings of colours deduced: e.g. Yellow as the dominant colour: child is enthusiastic, outgoing and more emotional than most, as well as dependent or Green as the dominant colour: more self-reliant and mature than others; displays leadership skills. This method depends entirely on the assumption that children will use one colour in at least 50% of the drawing. However, most children display a range of colours in their drawings. Golomb declares that in her study no link was found between colour choice and emotions (1992, 153); agreeing with Di Leo's statement that assessment and interpretation of feelings have eluded measurement by the methods currently available (Di Leo, 1983, 60). This method was chosen to determine if the theory that *colour choice equals personality interpretation* devised by Lewis and Greene (1983) would be a reliable method for the determination of feelings, attitudes or personality of a child.

Narrative Analysis (Rose 2007; Wright 2010) gives additional information about the child's intentions or experiences while drawing. Three of the drawings included stories and supplied rich information about the child's thoughts, ideas and insights, expressed in the drawings or related during the drawing process (Binder & Kotsopoulos, 2011; Di Leo, 1983; Golomb, 2004; Sewell, 2011; Wright, 2010). Meaning- making in visual imagery presents "layered complexity" (Binder & Kotsopoulos, 2011) which must be seen through "multiple lenses" (343), therefore this method was chosen to add to possible interpretations of children's drawings.

A Mixed Methods approach was also chosen for the interpretation of the selected drawings because the art work [similar to a poem] "may be layered, suggesting different ideas" (Day & Hurwitz, 2012, 39) and a "multitude of thoughts that embody [children's] everyday lives" (Binder & Kotsopoulos, 2011, 360). It included: analysis according to themes (Wright 2010), which aids to Interpretive Analysis; Wright (2010) recommends looking for themes in children's drawings. She reports the following themes: Family relations, Playing, Nature, Animals and Fantasy. Children will draw spontaneously but will add more details if asked to draw a theme (Golomb, 2004). It also included spiritual analysis. Binder (2003, 2011); Binder and Kotsopoulos (2011) and Bone (2008a) suggest becoming aware of certain spiritual expressions in a child's drawing: self-confidence; comfort being with the family or environment; interconnectedness to self, others and the world (Binder, 2011, 32); expressions of the 'everyday', of real and imaginary worlds (Binder, 2003, 16; Bone, 2008b, 270); or of the world of dreams (Bone, 2008a, 347) and 'moments filled with love' (Vygotsky, 1986, as cited in Bone, 2008a, 352) and a sense of personal harmony (Bone, 2008b, 267) in a magical world (Ibid, 273), to add another dimension about how children see themselves in relation to society and the world. Intuitive Analysis (Anderson, 2000; Binder, 2003) although highly subjective, is another dimension to this method and included to emphasise that drawings are not simply a collection of countable details, but rather contain aspects that point to the child as a complex human being.

Seven drawings (see Figure 1 below) by children aged between four and seven, were purposively selected for analysing using the above methods; based on the amount of information they might be able to provide. These drawings are from two venues: Columbia, South America and Queensland, Australia. Children's names were changed to guarantee anonymity. In each instance, children had drawn themselves (and their families) in their home environment. All children had a range of colours at their disposal.
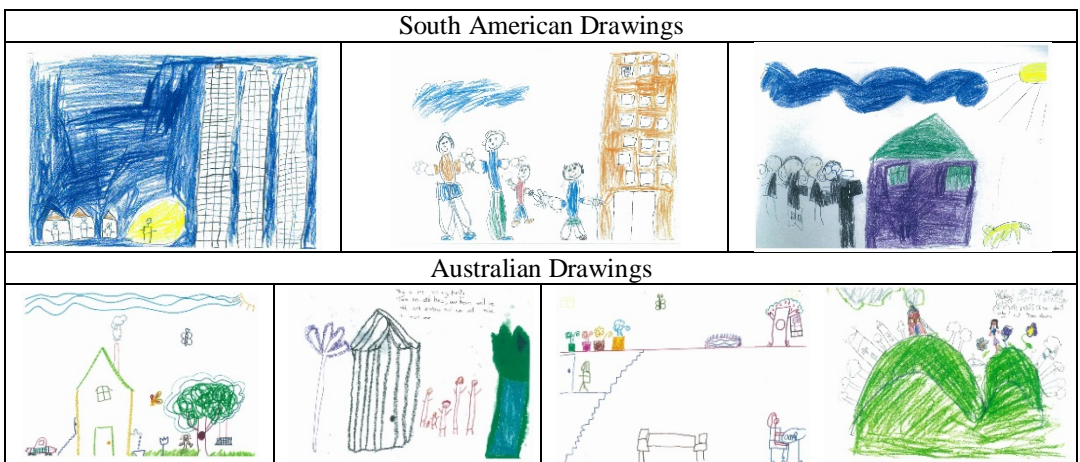

Figure 1. Seven purposively selected drawings

The drawings were examined by researchers with backgrounds in Education and Psychology; independently at first and then collaboratively. This supported trustworthiness in the research. Three of the Australian drawings had annotations in the form of narratives by the child

artist about the drawing. This came from voice recordings and researchers' notes. For the purposes of this paper, we present two examples of drawing interpretation: the first an unannotated drawing from South America; and the second an annotated drawing from Australia.

Unannotated Drawing from South America

Figure 2 (below) is by Mischa (pseudonym) of himself, his family and the home environment.

Figure 2. Mischa's drawing

Utilising the CID method, our process was:

First impression: Unusual – contrasts in sizes between houses and buildings, dark colours, yellow circle surrounding figure.

Content:

The home environment is mainly human-made.

It consists of three high-rise buildings and three small houses.

Each small house has a person in it.

A fourth person is drawn and surrounded by a yellow circle.

There are no trees or animals

Interpretive:

Theme: Family living in a big City

Lines are straight and angular, except for the circle and features of people

Colour choice minimal, mainly dark colours

Spiritual: This child shows a strong sense of self (the golden child protected in a bubble of light). It is depicted like a dream and contrary to Di Leo's interpretation of a "compartmentalized" family, all separated (1983, 72), this rather could mean that each

person has their own room. The child sees himself as the special one in the family; outstretched arms indicate he is ready to embrace the world.

Intuitive Vignettes: The child, presumably the figure in the yellow circle, is the most important character in the picture.

The emphasis is on the child and family in a human-made environment.

The child might not be able to play outside, as s/he is enclosed by a circle.

The small figures enclosed by houses or a circle seem overpowered by large, high rise buildings; but the child is safe in the yellow bubble.

It would have been very useful to have an accompanying narrative by the child to explain his/her intentions with the drawing.

Developmental:

This drawing would fall into the category of four to five year olds (Schirrmacher, 2002). The drawing shows abbreviated forms of humans with simple, square bodies. Hands and feet have been omitted. The houses and flat dimensional shapes are based on the square and triangle design already in use by 2 – 4 years of age. The high-rise buildings are dominant on the right side of the drawing; they are well-constructed without the use of a ruler. Colour is used emotionally: yellow encompasses a person, probably the self; blue is strongly scribbled, connecting the dwarfed houses to the buildings with a deep blue sky. This child is not showing photographic realism, but portrays family members inside houses (compartmentalised) while simultaneously showing the outside of the high-rise buildings.

Annotated Drawing from Australia

Figure 3 (below) is by Sabine (pseudonym) of herself, her family and the home environment. Narrative: "This is my mum eating breakfast, my sister going for a walk with a backpack on her back, and me on the swing under the tree in the garden."
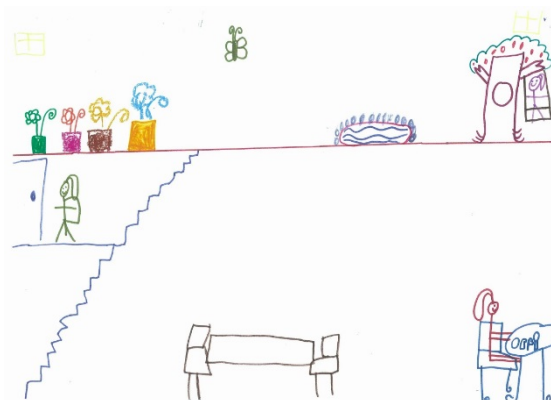

Figure 3 – Sabine's drawing

First Impression: Happy, multi-level drawing.

Content:

This child has included elements of the natural environment (tree, butterfly, plants) as well as human-made items (tables, chairs, eating utensils, door, swimming pool, swing).

Three different areas are depicted in one drawing: inside of house (where mother sits), the door of the house, and the garden area

Story tells of family life in the house and garden.

Interpretive:

Theme: Me and my house.

Mainly straight lines have been used for this composition.

Colour appears only in the natural objects

Spiritual: Sabine is aware of different levels of being in her home. The mood of the picture is light and happy. She is probably a sensitive child who cares for and understands nature, especially plants.

Intuitive Vignettes: There is movement in this picture as the eye wanders from the right bottom to the left middle and over to the right again. The different levels become obvious when the paper is folded and appears like a diorama.

Gender awareness (hair in ponytail) is indicated.

Developmental:

The drawing shows the "child's dilemma to represent the three dimensional world on a two dimensional paper" (Schirrmacher, 2002, 129) as she simultaneously tried to depict the inside and outside of her house, making a kind of map drawing; connecting the two views with stairs and a door leading to the outside.

She drew stick figures. No symmetry has been attempted. The drawing is composed on three different levels – a table, chair are floating on the paper's base line. A second base line is drawn for the door and a third for the garden area. There is an attempt made to balance the different parts of the drawing by diagonal arrangement of items in different corners of the paper.

This drawing would fall into the category of four to seven year olds (Golomb, 2004).

The other five drawings were interpreted in a similar way for the purposes of the research. It is important to note that only the child or the experienced analyst can interpret with some certainty what is depicted in a drawing. We need to remember this with every interpretation

Discussion and Conclusion

Findings from this research suggest that a holistic method for making sense of children's drawings be implemented when examining children's drawings. This would include all three approaches: Content, Interpretive and Developmental. Further text, in the form of written or

dictated stories, should be elicited where possible to help researchers and teachers understand the drawings.

In relation to the research question, *'How can we, as educators, best make sense of children's art?'* a critical issue that emerged was the need to move from monopolistic to holistic methods of analysis – to a Content, Interpretive and Developmental (CID) method. It has been observed by educators that realistic expression is not the culmination of graphic development in children, but that this assumption has led to the dominant position of Developmental Theory (Kolbe 2005). This notion is also supported by Di Leo (1983), Golomb (1992, 2004), and Malchiodi (1998).

The CID method for the interpretation of children's drawings combines three existing methods for ease of use and application when teachers look at children's drawings. It incorporates practical applications from each of the three methods as follows. From *Content Analysis, it* provides an overall awareness of detail about what items are included or omitted in the drawings. It is recommended that after first impressions, Content Analysis becomes the starting point in making sense of a drawing. This should be followed by Interpretive Analysis, which supplies a holistic impression to support Content Analysis. It will include the use of elements of design, such as line and colour; the mood of the drawing, the text accompanying the drawing, and the impression conveyed about children's understanding and how they see themselves in relation to society and the world. Finally, *Developmental Analysis can be applied* to support other forms of analysis. Di Leo (1983) confirms this method, noting that "an holistic approach is more productive of valid information than the atomistic item by item appraisal" (179), that one must keep sight of the whole drawing while looking at its parts.

This research confirmed the importance of accompanying text to drawings. Children's stories, comments and opinions add valuable insights to the interpretation of their drawings. Golomb (1992) reminds us that the child's "spontaneous verbalization during the drawing process is important" (274). Text makes it possible to 'read' drawings on a deeper level (Binder 2011; Binder and Kotsopoulos 2011; Golomb 2004; Sorin and Gordon 2010; Wright 2010) as meaning making in visual imagery presents "layered complexity" which must be seen through "multiple lenses" (Binder and Kotsopoulos 2011, 343). Children express their thoughts, feelings, insights or different ideas in their drawings (Day and Hurwitz 2012; Binder and Kotsopoulos 2011); therefore children's narratives while drawing give valuable added information about the content of their artwork.

Table 1 (below) suggests steps for making sense of children's drawings, using the CID method.

Table 1. Steps for making sense of children's drawings using the CID method

Step	Process
1	Write down your first impression – view the drawing as "mysterious" (Malchiodi, 1998, 19)
2	Do not yet look for recognisable items (that's an adult view, the child might have thought of something totally different)
3 - Content	To get an idea about what is in the drawing, look for what natural/ human-made objects are present and how many. How else can they be classified? (eg. domestic animal; wild animal; hands and feet omitted/included)
4- Interpretive	How were the elements of design (line, shape, colour, texture, space) used? Be careful with colour interpretations, which might be based on Western background or colour preference of the child, or the only colour left in the box!
5	What is the overall mood of the drawing?
6	What does the accompanying text add to the interpretation?
7	What are the emerging theme(s) of the drawing?

8	What are the spiritual components of the drawing. How is Self represented? How is the relationship to others shown? Does the drawing represent a joyful person, a confident person, a self-reliant person, a person who loves nature? What other unusual features are there? What can we feel intuitively about this drawing (seeing it through the eyes of a child).
9 Developmental	How does the drawing reflect what is considered age or developmentally appropriate drawing? This is not definite, but can move backward or forward.

Future research about making sense of children's drawings could include direct interactions with students; involving recorded, structured and/or semi-structured interviews and a larger student group. More educators and psychologists could be involved to input their interpretations, and children themselves could directly participate in the interpretation of their and their peers' drawings. Further, teacher worksheets to implement the CID method could be developed. The CID method may also be useful in interpreting other forms of children's art work, such as collage, painting and three dimensional visual art work.

An important statement by Di Leo (1983) is to be considered for any analysis of child art that "an holistic approach is more productive of valid information than the atomistic item by item appraisal" – keeping sight of the whole drawing/work (the bigger picture) while looking at parts for analysis (179). It should also be noted that only the experienced art therapist or the children themselves can interpret with some certainty what exactly is depicted in the drawing.

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