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## Researching with Young Children: considering issues of ethics and engagement

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**ABSTRACT** When conducting research with young children it is important to consider not only the data which have been produced as a result of the research, but also the research process itself. This article presents a parallel analysis of data which has been articulated elsewhere from a three-year study of children's understandings about measurement. This article considers the overarching methodological issues which arose from the study and implications for the ways in which the data should be viewed. Specific points for discussion which emerged during this research are: ethical considerations; notions of shared perspectives, recurring images, and socially-constructed images; the perceived 'reality' of the events depicted; differences between children's perspectives and adults' perspectives; the risk of intervention; and the competence of children in the research process.

### Introduction

The discussion in this article is centred on a three-year study of young children's mathematical understandings. This study was underpinned by a motivation to foreground the voices of children in research, and acknowledge the insights, experiences and knowledge possessed by these young children. While the main focus of the study was on eliciting young children's mathematical understandings, parallel to the main analysis was an exploration of the overarching issues around ethics and engagement when researching with young children. This article begins by providing the background to the study, including the methodological motivations and ethical considerations which underpinned the research. What follows is a discussion of the issues of ethics and engagement which emerged during the research.

### Background to the Research

This study was about finding out the experiences with, and understandings of, measurement which children possess as they commence school. The study traced children's development of measurement understanding as they entered formal schooling, and as such, explored the transition from early understandings of measurement through to the introduction of more formalised notions of measurement. Utilising an ecological theoretical perspective (see, for example, Bronfenbrenner, 1974, 1979, 1988), this study considered the measurement learning which occurs in contexts outside of the classroom, and the ways in which children were able to represent their measurement experiences and understandings in a meaningful manner. This emphasis upon making the mathematics meaningful is particularly important at the start of school, as children bring with them a range of informal mathematics knowledge which has been developed in out-of-school contexts. As Clements and Sarama (2000) argue, the intuitive mathematics that students learn through personal experiences is the most influential process for early mathematics development. Furthermore, Bonotto (2001, p. 75) has proposed that educators 'should be prepared (a) to see mathematics incorporated into real world, (b) to investigate mathematical ideas and practices of

their pupils, and (c) to look for ways to incorporate into the curriculum elements belonging to the sociocultural environment of the pupils, as a starting point for mathematical activities in the classroom'. This study was grounded in an ethos that educators must be respectful of children's mathematical experiences and knowledge which they have developed for their own purposes as a result of activities and interactions in prior-to-school and out-of-school contexts.

### *Context and Participants*

The participant children in this study attended two primary schools in a town in regional New South Wales (NSW), Australia, with the schools selected to represent the variance of the town's population. The two primary schools were invited to participate on the basis that they operated a transition to school program. At the commencement of the study, the participant children were in their prior-to-school year, and during the course of the research these children were followed through the transition to school and their first year of formal schooling, known as Kindergarten in NSW. Children in NSW commence Kindergarten in late January. They 'must start school by the time they are 6 years old but they may start in the year they turn 5, provided their fifth birthday is before July 31 of that year. Hence, it is possible for a new Kindergarten class to contain children aged between 4 years 6 months and 6 years' (Perry & Dockett, 2005, p. 65).

### *Methodological Motivations and Approaches*

An important focus for this study was foregrounding the voices of children in research. Morrow and Richards (2002) have argued that in social research, children are often positioned as vulnerable, incompetent, and relatively powerless in society in general. They assert that in everyday social life, we tend not to be respectful of children's views and opinions, and the challenge is to develop research strategies which are fair and respectful to the children with whom we are conducting research. As Lansdown (1994, p. 38) points out, we simply 'do not have a culture of listening to children', and, as Morrow and Richards explain, the consequences of this present a dilemma for social researchers:

we simply are not used to talking to children to try to ascertain their views, opinions and so on. There are so few attempts to understand children's lives 'in their own terms', and taking children's own words at face value and as the primary source of knowledge about their experiences effectively goes against a tradition in sociology in which children's voices have rarely been heard and their opinions rarely sought. The challenge for social research is to find ways of eliciting children's opinions and experiences, to develop appropriate methods, and corresponding strategies to deal with ethical dilemmas that may arise. (2002, p. 271)

James (1995) has suggested that the ways of 'seeing' children that researchers hold have a profound impact upon the way in which we study children. She has identified four overlapping ways of seeing children: the *developing* child; the *tribal* child; the *adult* child; and the *social* child (p. 4). The first of these perspectives, the developing child, typically utilises research methods such as experimentation and observation. Consequently, children's competencies are undervalued, and when children's voices are elicited their words may not be taken seriously or even trusted. The second perspective, the tribal child, tends to utilise methods such as participant observation, taking the view that children inhabit an autonomous world, separate from adults, with its own rules and agendas (Morrow & Richards, 2002). By comparison, the adult child view sees children as competent participants in a shared, but adult-centred world, with attention focused on children's perspectives on, and comprehension of, an adult world in which they are required to participate (James, 1995). Methodologically, the assumption is that children are the same as adults in research, and thus the same tools can be used with children as with adults. However, the differences between adults and children in terms of social status and experiences are not always addressed, and asking children about things they have not experienced only makes it easier for adults to conclude that children are not only ignorant, but incapable of understanding (Alderson, pers. comm., in Morrow & Richards, 2002).

James's fourth model, the social child, offers an alternative perspective. This model envisages 'children as research subjects comparable with adults, but understands children to possess different competencies, a conceptual modification which permits researchers to engage more effectively with the diversity of childhood' (1995, p. 14). Children are skilled in different mediums of communication (such as drawings, stories, written work), so, as researchers, we need to utilise these. As James notes:

It behoves us then to make use of these different abilities ... Talking with children about the meanings they themselves attribute to their paintings or asking them to write a story ... allows children to engage more productively with our research questions using the talents which they, as children, possess. (p. 15)

Taking inspiration from James's social child model, this study was designed to draw on the communication strengths of children by utilising research methods with which most children are familiar and confident. This was particularly important for the study because it allowed children to show their worlds in rich and meaningful ways.

#### *Data Gathering Approaches*

As Mason and Danby (2011) describe, a major paradigm shift has occurred in child research – a shift from the child as the *object* of research, to the child as an *actor* in the research. In order to allow the children in this study to be actors who communicate their understandings and experiences in meaningful ways, two representational forms were utilised: children's drawings and children's photographs.

*Children's drawings.* Drawings are a useful tool for researching with children because for many children, they provide a research activity which is familiar and non-threatening (MacDonald, 2009). The children can change and add to the drawings as they choose, and as drawings often take time, a quick response is not demanded (Einarsdóttir, 2007). Drawings are a powerful medium for accessing the inner thoughts, feelings and experiences of children; and while a child may not be able to verbally articulate a memory or experience, through the process of drawing, the story is revealed (MacDonald, 2009). Six open-ended drawing tasks were used in this study. The tasks were implemented on two occasions: once at the beginning of Kindergarten, and again at the end of the year. The tasks were as follows:

1. Draw yourself measuring;
2. Draw something tall and something short;
3. Draw something heavy and something light;
4. Draw something hot and something cold;
5. Draw a ruler; and
6. Draw a clock.

The children were asked to produce a drawing in response to each task and to provide a description of their drawing. This accompanying narrative was annotated on the drawing, so that the drawing and narrative could be considered as a whole. It can be tempting for researchers to interpret drawings according to their particular research agenda, but this, however, may not necessarily relate to the intentions of the drawer (Dockett & Perry, 2005a). Placing an emphasis on listening to children while they draw, instead of trying to analyse their drawings, is important as the children's narratives and interpretations of their drawings can provide greater insight than the adults' interpretations of the drawings (Punch, 2002; Einarsdóttir, 2007). Furthermore, this acknowledges children as competent interpreters of their everyday worlds, and opens up possibilities for understanding their constructions of their social worlds (Mason & Danby, 2011).

*Children's photographs.* A selection of children also participated in a photography activity. The children were each provided with a digital camera and were encouraged to take photographs of the occasions in their lives outside of school during which they used or encountered measurement. By giving just a broad idea, the power of the data gathering activity was handed over to the child (Greenfield, 2004). I decided to use digital cameras as I wanted the children to have the freedom to

take and retake photographs at will, giving them complete control over the images produced. Parents were instructed to only provide assistance if requested by the child.

At the conclusion of their time with the camera, I met with each child to look at and discuss the photos. These conversations were audio recorded and later transcribed. During this time, the children explained each of their photographs, providing details about the particular locations shown, or identifying the other people in the images. In this way, the children were able to ensure that the photographs accurately represented what they had intended, and each child and I were able to develop what could be considered a 'taken-as-shared' (Cobb, 1990) understanding of the images and their accompanying narratives.

### *Ethical Considerations*

When social research involves direct contact with children, it may be necessary to face ethical questions that are lessened, or altogether avoided, when the research is indirect or involves adults (Thomas & O'Kane, 1998). Indeed, ethical issues are often thought to be the central difference between research with adults and research with children (Punch, 2002). However, Christensen and Prout (2002) have put forward the notion of what they term 'ethical symmetry', taking the stance that 'the ethical relationship between researcher and informant is the same whether he or she conducts research with adults or with children' (p. 482). Supporting this notion of ethical symmetry, Lewis (2002) has articulated six points which should be considered by those engaging in research with children in order to ensure child participants are bestowed the same ethical entitlements as would be adult participants. These six points for consideration are as follows:

1. Access/gatekeepers;
2. Consent/assent;
3. Confidentiality/anonymity/secrecy;
4. Recognition/feedback;
5. Ownership; and
6. Social responsibility.

*Access.* A key consideration in this study was how I would access the children with whom I would potentially conduct my research. With the consent of both the principals and teachers, I became involved in the schools' transition programs as a support teacher. This gave me the opportunity to interact with the children who would potentially be involved in my research, and become a familiar person whom they trusted. It is important to point out that at this point in time I was *not* conducting research – rather, I was simply spending time with the children and getting to know them before approaching them about participation in my study. My intent was that, by spending this time getting to know the children, when I explained the research project to them and asked for their participation, they would already be used to working with me, and as such would view their involvement in my research as a non-threatening experience. The time devoted to establishing relationships with the children was both enjoyable and rewarding, and as a result, the research project itself began to feel like a journey the children and I were embarking on together – the project truly became a process of researching *with* (rather than *on*) children (Mayall, 2000; Einarsdóttir, 2005; Bergmark & Kostenius, 2009).

*Consent.* As Gray and Winter (2011, p. 30) articulate, studies often 'employ the terms "consent" to denote adult permission and "assent" for children's permission, with the latter viewed as less important'. However, they argue that the power differential between children and researchers is further increased in studies which employ these terms. They suggest that the 'solution to the perennial problem of status differences is to employ the term "consent" with both groups' (p. 30). Indeed, as Danby and Farrell (2005) advocate, children should be viewed as gatekeepers of their own accounts, competent to withhold or share their experiences, and ultimately decide whether or not they wish to participate. As this project emphasised research with young children, I sought informed consent from both the parents and caregivers, as well as from the children themselves. Information letters were issued to parents and caregivers for them to read and understand before signing a consent form for their child's participation. I also visited the children at school to explain what would be asked of them and to answer any questions they had. The children were also shown

the information sheet and consent form which was sent home to their parents or caregivers, and I explained what these documents said and meant. The children were then given their own consent form which asked them to indicate whether or not they wanted to participate by colouring either the 'smiley face' or the 'frowny face'. However, under the guidelines of both the University and state education department ethics committees, the children were not able to participate unless the parent or caregiver's consent was also given. Additionally, the children were entitled to the choice not to participate, even if their parents or caregivers had given their consent for their child to participate. I felt it was important that the children who chose not to participate (one child only) were still given the opportunity to complete the in-class drawing activities, so that they would not feel ostracised, but their drawings and narratives were not included as part of the data set.

To me, the decision to invite children to complete a consent form of their own was both logical and essential, and I perceived this to be a fairly straightforward process. However, I was surprised (and somewhat bemused) by the differing reactions to the consent form I devised when it was presented to the University's ethics committee. The most prominent issue was around the use of symbols for consent and non-consent. One committee member was concerned about the implications of the 'smiley' and 'frowny' face used on the form, and the assumptions embedded within these, i.e. that the child's participation would make me 'happy' and a decision not to participate would make me 'sad'. While there is certainly merit in this point, alternative symbols were discussed amongst the committee and each was found to have their own embedded assumptions. For example, the possibility of using a 'tick' and a 'cross' was raised, but I personally found this to be even more problematic as the assumption is that participation is 'right' whereas non-participation is 'wrong'. Given the assumptions attached to the use of symbols, the need for gaining consent in this manner was questioned, and it was suggested that instead I simply write the words 'yes' and 'no' on the consent form. My argument was that as I was seeking consent from children as young as four, it was important to construct the consent form in a manner which was accessible to these children. The words 'yes' and 'no' are, in and of themselves, symbols, but they are symbols which are meaningless to a child who cannot interpret their significance. Taking this approach would defeat the purpose of seeking consent from these young children, and indeed, enforce the power of the adult, and the adult's way of knowing, in the research process. In the end, a compromise was reached by including both the 'smiley' and 'frowny' faces, and the words 'yes' and 'no'.

Given these complex issues around the children's consent form, another member of the University's ethics committee questioned the need for a children's consent form at all. This point I strongly disagreed with because I share the view of Harcourt and Conroy (2005) that any potential participant in any research process, including children, must be given the right to decide whether it is in his or her own best interest to collaborate. In the end, all but one of the children chose to participate in the study. Of course, it is important to consider that this rate of consent may reflect the children's desire to 'please', or 'do the right thing' by agreeing, or that the children may in fact have not understood the consent form after all. However, I would like to think that this participation rate reflected the trust the children had in me as a result of our interactions prior to the research commencing.

*Confidentiality.* A significant consideration in the reporting of research with children is the use of pseudonyms (Barker & Weller, 2003). To maintain confidentiality, my original intent was to apply pseudonyms to all the children who participated in the research; however, I soon discovered that I needed to rethink this intention. Given that the research took place during Kindergarten, a time when most children are learning to write their name and proudly display this at every opportunity, the majority of the children's names had a very clear presence on the drawings they produced. To combat any ethical concerns which may have arisen from this, I ensured that only the child's first name was used, and the setting of the research remained confidential. Clark (2007) also acknowledged this issue, noting that children often record their name as a declaration of their presence. Furthermore, as Dockett et al (2011) describe, children may demonstrate pride in their contributions and want to make their contributions known. Conroy and Harcourt (2009) have raised the question of whether researchers should pursue the issue of anonymity, or instead begin a new dialogue which responds to this new context of collaborative research with young children. On the one hand, a lessening of the emphasis on applying pseudonyms (where appropriate) allows

child participants to feel a sense of presence and pride in the research process and dissemination. However, as Dockett et al (2011) caution, researchers should reflect on the potential long-term consequences of this. They question, for example, how these same children might feel in years to come when reporting of the data remains accessible. This emergent debate around the use of pseudonyms with child participants should not be taken lightly, and should provide a challenge and provocation for future studies with young children.

*Recognition.* Checking with the children that the researcher's attempts at understanding make sense to them is a very useful practice, which is in line with the goal of keeping faith with children's own perspective and voice (Greene & Hill, 2005). As Dockett and Perry (2007) point out, it is the co-construction of shared or agreed understanding which is paramount. Talking with the children while they drew, and the discussions that took place after the photography activity, gave me the opportunity to ensure that I had an understanding of the meanings which the children intended with the drawings and photographs.

*Ownership.* Harcourt and Conroy (2005) have suggested that researchers consider what rights the child has to see the data collected and to have the work returned at the end of the data collection process. As Malchiodi (1998, p. 225) highlights: 'In the natural course of making art, the children who create the drawings or art expressions expect to keep the drawings they create, especially if they like to draw and feel positively about their creations'. In my research, I felt it was important to acknowledge that the work belonged to the children, not me. Therefore, I decided that it was important for the children to retain ownership of all of the work produced during the study. I initially collected the drawings and photographs which were produced so that I could make copies for my own use (scans of the drawings and copies of the digital photograph files), then at the conclusion of the data gathering period the participant children were given a portfolio of all their work (the originals, not copies) to keep.

*Social responsibility.* Setting out to research children's experience implies a respect for each child as a unique and valued experiencer of his or her world (Greene & Hill, 2005). There has been a shift towards acknowledging children as social actors with understandings that we might learn from (Cree et al, 2002), and, as a part of this new conceptualisation of children, they should be credited with 'knowledge' (Mayall, 2000, p. 120). As such, I made the conscious decision to allow the children's voices and representations to permeate the presentation of the research, in recognition of the knowledge the children have to offer and their subsequent contribution to the collective understanding about how children engage with measurement. This was achieved by utilising the children's representations and narratives verbatim, unedited – in a sense, letting the children tell their own stories. This required an amount of restraint on my behalf, as I tried not to put too much of the 'researcher voice' on top of the children's own voices. Though at times difficult, this is an important step in honouring the understandings of the children themselves.

### **Emergent Issues of Ethics and Engagement**

When conducting research with young children it is important to consider not only the data which has been produced as a result of the research, but also the research process itself. This article serves as a parallel analysis of the data which has been presented elsewhere (see, for example, MacDonald, 2010, 2011, 2012; MacDonald & Lowrie, 2011) which had as its main focus an analysis of children's understandings about measurement. The article considers the overarching methodological issues which arose from the study, and implications for the ways in which the data should be viewed. Indeed, as highlighted by Schiller and Einarsdóttir (2009, p. 126), 'in recent years, researchers have pointed out challenges, paradoxes, and dilemmas in relation to young children in research, and ethical issues and problems have begun to surface'. Specific points for discussion which emerged during this research are: notions of shared perspectives, recurring images, and socially-constructed images; the perceived 'reality' of the events depicted; differences between children's perspectives and adults' perspectives; the risk of intervention; and the competence of children in the research process.

*Shared Perspectives in Representations*

The first point for contemplation which emerged from this research was the issue of children co-constructing their representations during the drawing activities. As Einarsdóttir (2007) has pointed out, the possibility that children might imitate the drawings of others is a disadvantage of the method with which researchers must contend. However, it must be considered that the co-construction of representations need not be viewed with negativity; indeed, it may represent a shared perspective as a result of the social construction of meaning. This was an issue I encountered with two of the students who participated in the research. The two girls, Lara and Mekenzie, were very close friends who often sat next to each other and as such approached the drawing tasks from a shared perspective. Indeed, on all five occasions on which the girls were seated next to each other, their drawings were undeniably similar in appearance and content (see Figure 1).

Lara



‘That’s tall and I’m short’.

Mekenzie



‘A big tall tree. I am short’.



‘This mountain is really cold. The fire is hot’.



‘This is a cold mountain. The fire is hot’.

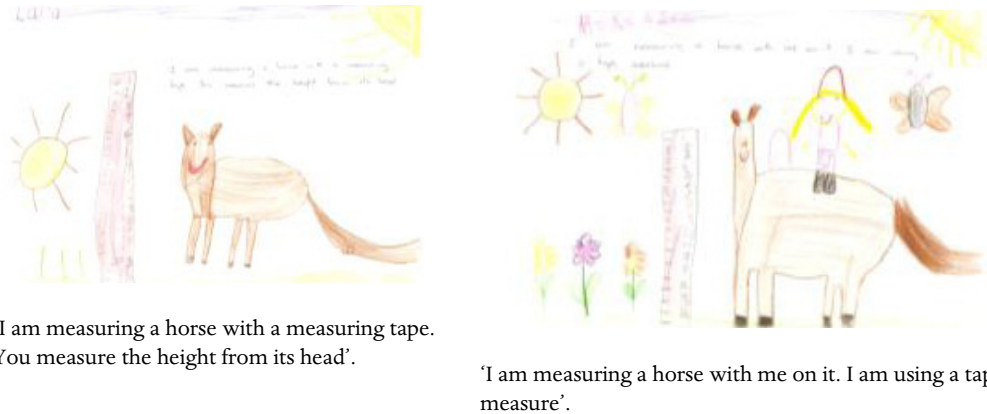


Figure 1. Examples of shared perspectives during drawing activities (Lara and Mekenzie).

The acknowledgement that some children may co-construct, or indeed, imitate, the work of others brings about an important realisation for researching with young children – as Punch (2002) explains, ‘it is important not to over-interpret the significance of certain recurring images’. Furthermore, it is important to acknowledge that this is a potential issue not just when using children’s drawings, but indeed, in any assessment situation where individual knowledge and understandings are sought. There is also the potential for this imitation to arise in test situations or when completing surveys. However, this challenge can be addressed from two differing perspectives. Firstly, it is possible for the researcher to manage the environment so as to reduce the risk of imitation occurring (i.e. seating children individually, or relocating children whom have shown evidence of imitation). Alternatively, and perhaps more favourably, the researcher could acknowledge that knowledge is socially constructed, and the presentation of shared perspectives amongst the data can be viewed as a social, rather than individual, way of making meaning.

#### *Recurring Images in Representations*

While it is important to consider the reason for the recurrence of images between children, it is also important to acknowledge the recurrence of images for individual children. In tasks where children are asked to represent things in a way which is personally meaningful to them, there is the possibility that they will ‘fixate’ on an object of significance and repeat this object from task to task. Two examples of recurring images which emerged in this study were those of Abby and Caitlin (see Figure 2). It became clear as Abby was completing the series of drawing tasks that her dogs Pieper and Pico have a significant role in her life, so much so that they infiltrate her personal constructs of measurement. Caitlin, similarly, has an obvious affinity with mermaids, with these figures present in most of her responses. These two children have clearly demonstrated that measurement understandings are often borne out of constructs which are deeply personal and idiosyncratic – that is, contexts which could not have been predicted and, had the representations not been created, may have gone unrecognised.

It is important to acknowledge that recurring images are not a negative aspect of researching with children because when children show evidence of fixation on particular images they are providing the researcher an insight as to their baseline representation for sense making. Clearly, this representational baseline is deeply significant for the individual child, and knowledge of this baseline may assist educators in relating measurement knowledge to children’s contexts in meaningful ways. For example, if the child regularly produces representations of their pet dog, then it may be useful to encourage the child to compare other objects to their pet, i.e. asking ‘is this object taller than or shorter than your pet?’. In this way, the fixation provides a meaningful basis for the measurement process.



Abby



I am short. My Mum is tall. My dog Pico. My brother Callum'.

Caitlin



'This one's the tallest. They're mermaids'.



'Pieper's short and Pico is tall. I used a ruler. She is up to the 8 and Pieper is up to the top of the short ruler'.



'A mermaid and an angel. The mermaid is big and the angel is small'.



'Pico is heavier than Pieper because it is a bigger breed of dog'.



'A mermaid and a butterfly. The mermaid is heavy and the butterfly is light. I know the mermaid is heavy 'cause I'm imagining I'm holding her and she feels heavy'.

Figure 2. Examples of recurring images during drawing activities (Abby and Caitlin).

### Socially-constructed Images in Representations

Another key consideration regarding the repetition of images in children's drawings is the inclusion of socially-constructed images. The responses to the 'Draw a clock' task indicated that the children in this study had notions of what a clock 'should' look like, perhaps as a result of the predominant representation of analogue clocks in their social contexts. All of the children chose to draw an analogue clock, even though nothing about the task precluded them drawing a digital clock. Clarke (1998) had a similar finding from his work with children's drawings of clocks, noting that the children in his study considered 'a clock' as being a standard analogue clock. Moreover, many of the children represented the stereotype of an alarm clock – that is, a circular analogue clock with bells on top. For example, Zafar (Figure 3) chose to draw an alarm clock ('a bell clock') even though, by his own admission, he had not seen one before.



Figure 3. 'It's a bell clock. I haven't seen one before'.

In addition, the children's 'hot' and 'cold' drawings were clearly influenced by socially-constructed notions of temperature. Most of the children's 'hot' drawings depicted either fire or the sun, while equally as many drew ice or ice cream as the 'cold' object. Additionally, there was a stereotypical use of colour evident in the children's drawings, with red being used to indicate 'hot', while blue was used to represent 'cold'.

While it is possible that the children were simply drawing what they perceived as 'expected', rather than capturing objects and contexts which were truly meaningful to them, an alternate perspective is that the use of socially-constructed images may in fact be an insight as to the child's baseline for representation – one which has developed as a result of their participation in a range of social contexts. In this way, the representation of these images offers an insight as to the powerful influence of the broader context – including social, cultural and historical circumstances – beyond that of the child's immediate constructs. Moreover, they can be used as a focus for extending the child's developing ideas of a concept.

#### *'Reality' of the Representations*

A difficulty which researchers must confront when eliciting children's views is the question of whether they can 'really believe' children's accounts of their experiences (Morrow, 1999, p. 206). A common assumption is that children cannot distinguish between reality and fantasy (Punch, 2002). Indeed, many of the children's drawings were not real events. But, what is important is not the 'reality' of the depiction – that is, whether or not it was a 'real' event – but rather the meaningfulness of the depiction to the child who has created it. This echoes Bronfenbrenner's notion of 'reality' as perceived by the individual, and the importance of the researcher's ability to elicit the meaning the individuals themselves apply to their own experiences (1979). In this way, the

narrative component becomes an all the more important addition to the visual representations as it allows the child to articulate the meanings which they themselves attribute to the representations.

It is important to acknowledge that the construction of personalised meanings is a process not restricted to researching with children. Certainly, research participants of any age may construct and communicate personal meanings in a variety of ways which are not wholly reflective of 'real' events. Tools such as metaphor, analogy and hyperbole provide powerful means of communicating individually meaningful understandings and perspectives, at any age.

#### *Perspectives on Representations*

Cook and Hess have suggested that 'to learn about a child's perspective adult researchers have to get beyond their own beliefs about a situation and listen to children in different ways' (2007, p. 31). In doing so, it may be found that the child's interpretation of a situation is quite different to that of the adult. An example of this is the interpretation of a photograph taken by Ben, a five-year-old child (see Figure 4).



Figure 4. 'That's lighter and that's heavier'.

On the basis of the photograph alone, we could reasonably assume that the intention of the photograph was to show the differing surface areas of these chairs. However, upon discussing the photograph with Ben, it was found that the purpose of photographing the chairs was not to capture their differing areas, but rather their differing masses:

Amy: In this picture you've got some chairs. Why did you take this one?

Ben: Because that's lighter and that's heavier.

Amy: How do you know that chair is heavier than the other chair?

Ben: I know that one's light because I can carry that one.

This example clearly demonstrates that gaining the child's explanation of their photograph is paramount. This view is supported by Cook and Hess (2007, p. 41) who, in critiquing their own use of photography as a research method, acknowledged that 'an exploration of what meaning the children might have attached to the process of taking photographs could have strengthened the validity of the interpretations made by the adults'.

#### *Intervention in Representation*

It should be noted that parent intervention is a risk to be considered when employing research methods in home environments. Despite being informed that they were not to assist their children unless the child specifically asked them to, at times the parents felt the need to intervene. An example of this was a photograph of a recipe taken by Ethan. While it could reasonably be assumed

that Ethan had taken the photograph to show the different measurements listed on the recipe page, upon talking about the photograph with Ethan, it was established that his mother had in fact suggested taking the photo, and that Ethan had his own interpretation as to why this might have been:

Ethan: Mum wanted me to take a picture of the recipe.

Amy: Why do you think Mum wanted you to take a picture of the recipe?

Ethan: She might have thought you wanted to make it.

Another issue of parent intervention was parents deciding whether or not the photographs taken by the child were 'relevant' to the research activity. On one occasion, after looking at the photographs their child had taken so far, a parent decided that they were not relevant and deleted them. Later, the child informed me of the deleted photographs and his confusion as a result of this because, as the child explained to me, he believed he had indeed taken photographs of 'measuring'. Because I was removed from the activity, I did not have the opportunity to explain to the parent that while the picture may not immediately appear to be relevant to measurement, when the child is later given the opportunity to describe their pictures we are able to see the meaning and relevance the picture has to them. This reinforces the importance of the narrative element when utilising visual research methods with young children.

### *Competence of Children as Representors*

In this study, I felt it important to acknowledge the technical prowess of these young children because recognising the competence of children is a step forward in addressing the potential power imbalances which exist when conducting research with children. While there are increasing numbers of studies involving children's use of digital cameras (see, for example, Dockett & Perry, 2005b; Einarsson, 2007), when presented to the University's ethics committee, this study was met with concerns about the children's ability to operate the cameras. However, I found that all of the children were experienced at using a digital camera and required only a quick demonstration as to how the particular model of camera they were given operated. Furthermore, when the children returned the cameras, I was delighted to find that in addition to capturing still images, some children had also created brief measurement-related films using the video-recording function on the camera. For example, one child filmed himself rifling through the kitchen draw, pulling out various items such as measuring cups and spoons, and explaining their purpose. In this way, the child was able to both create and interpret their own data which, as suggested by Morrow and Richards (2002), is a step towards diminishing the imbalanced power relationships between children and adults.

### **Conclusion**

Researching with young children is both challenging and rewarding, and affords researchers the opportunity to use a range of methodologies which align with the communication strengths of children. However, in applying such methodologies, it is important to recognise that there are inherent issues which must be considered and addressed. Issues of ethics and engagement affect the ways in which the data are viewed and used; but the acknowledgement of the influence of these issues goes a long way towards enhancing the integrity of the data and subsequent analysis. It is beneficial to the research to identify and describe these issues, and consider their implications for the ways in which the children's perspectives have been informed and constructed in order to create meaningful representations. In this particular research context there were several issues presented in the data set, and some important insights result from these: some children's representations are jointly-constructed, shared perspectives, which result from children's participation in their social worlds; some children represent recurring images which hold personal significance, such as their pets or mermaids; while others provide accounts of events which are not necessarily 'real', but are nonetheless meaningful. However, these issues should not be viewed as deficits of researching with children; rather, they are exemplars of the ways in which children construct and represent meaning, and they offer idiosyncratic insights into children's ways of understanding their worlds.

## Acknowledgement

The author would like to thank Professor Bob Perry for his thoughtful and constructive advice provided during the preparation of this article.

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