A Study of Infants in the Child Care Context

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INTRODUCTION

The thesis studies infants in the child care environment with context being viewed as a major factor influencing growth and development. An exploration of the child care setting as a developmental niche (Super and Harkness, 1986; Valsiner, 1987; Cole, 1996) is therefore focus of this research. Everyday experiences of infants in long day care are examined through the language environment which is viewed as an expression of the culture of the setting and the social relations that exist in these institutions. Knowledge of everyday events and the infant's role in the child-care setting is explicated through micro-analysis of video observations.

BACKGROUND

The thesis uses longitudinal video data to achieve its purpose of describing two centres as developmental niches using communicative language experiences. The developmental niche has been described by Harkness and Super (1986) as a "theoretical framework for studying cultural regulation of the micro-environment of the child" (p. 552). There are three subsystems within the developmental niche. These are the physical and social settings, the culture, or practices of child care or child rearing, and the psychology of the caregivers. Valsiner (1987) has a complementary view of the developmental niche and describes the child's canalisation into the culture as being brought about within three metaphorical zones. The zone of free movement provides freedoms and restraints, then there is the zone of promoted activity and, if joint accomplishment is achieved, the child moves into the zone of proximal development. It is argued that the child care setting has characteristics that are peculiar to the particular environment and explication of these could help to develop practices that strengthen the day care setting in its role of facilitating the child's development. A detailed study of children within the child care context is needed to support the argument. Researchers like Graue and Walsh have identified that there is a need for such studies.

Many children spend 80 percent or more of their waking weekday lives in child care. For its invasive presence in children's lives, try to find thick descriptive accounts of children’s experiences when they leave home and enter the child care situation. There are amazingly few...We contend that the
present discourse on child care would be dramatically changed if a body of
interpretive studies of child care existed (Graue and Walsh, 1995, p. 140).

The choice of using language and communication as a window onto the
child's experience grew out of the influence of Vygotsky (1962) and his
theories on the role
language, as communication, plays in development (Rommetveit, 1987).
Children
construct their knowledge of the culture as they learn language and therefore
language is seen as facilitating one's understanding of one's self and the
community as well as becoming a mental tool (Vygotsky, 1962; Mead, 1934).
The
relationship between language, culture and cognition is central to this study.
The
approach to language and language use adopted for the thesis is grounded in early
childhood philosophy. The social nature of development is emphasised and
language is seen as communication and is central to determining human action.
Lock (1980) describes communicative acts as being an equilateral triangle that has
an act, an action and a context. For the infant the action may have communicative
intent or it may have “perceived” communicative intent (p.4). Adamson and McArthur
(1995) extend this triangular sharing situation by adding the Vygotskian view of the
social origins of development and place the triangle in a frame of conventional
codes with culture being the overlying field. Such a structure assists in connecting
culture, meanings within symbolic systems like language and what is being
communicated within the particular context. This thesis examines infants in a
specific context so the points of the triangle have become the entity or event, the
caregiver, or more competent peer, and the infant. Interactions, or joint attentional
sequences, (Moore and Dunham, 1995; Frye and Moore, 1991; Bruner, 1983) are a
major factor in the child gaining an awareness of self and others as intentional
communication and an awareness of the intentions of others develops. The
language focus for the thesis is therefore shared referencing and intentional action.

Work on infants and intersubjectivity (Trevarthen, 1992, 1980; Trevarthen and
Hubley, 1978) has given insights into infant communication skills and infants' understanding of mind. Trevarthen (1992) discusses the infant's awareness of intentionality in others which occurs at about nine months. This can be equated with
the beginnings of a theory of mind and, if we include sensitivity to the emotions of
others and the ability to communicate with a responsive other, then intersubjectivity
can be observed to be present at birth. It is with this social infant in mind that the
child care centre as a developmental niche is studied.

THEORETICAL APPROACH

The Vygotskian emphasis in this research has much in common with a
phenomenological approach to research which looks at people’s actions in order to
discover values, motives and intentions (MacNaughton, 1996) and has a belief in
consciousness as subjective and meaning making (Cohen and Manion, 1989).
Within the framework of phenomenology there are a number of traditions and the one closest to the present study is that of symbolic interactionism (Hewitt, 1997, Cohen and Manion, 1989 and Mead, 1934). This is a tradition that sees the society and the individual as inseparable. Guiding forces in the social group that constrain social action consist of such things as cultural norms, status positions and role relationships (Dahlberg, Moss and Pence, 1999; Jacob, 1987). Such constraints are noticeable within the child care centre and need to be recognised if the everyday experiences of individuals are to be studied in relation to the context. Infants are both context vulnerable and context dependent in that they often have little choice about their presence and levels of participation (Graue and Walsh, 1995).

AIMS OF THE THESIS

The aims of the thesis:
- To observe and record communicative language experiences of infants in child care settings
- To describe the physical and social design of the child care centres being studied in relation to affordances (Valsiner, 1987)
- To interpret the children's experiences and reflect on the meanings the child might make of the actions of others in relation to the child's growing sense of self

In order to be able to:
- Discuss how the cultural beliefs and practices within the setting can impact on relationships
- Discuss the importance of context when examining human activity
- Discuss the potential of the child care setting as a developmental niche
- Discuss implications for child care professionals.

Early childhood and research

The spirit of this research is not to address the question of whether very young children and babies should be in nursery settings, but to ask instead what kind of experiences do these young children have and what conditions and circumstances are needed to enable staff to provide the care they need. (Elfer and Selleck, 1998, p. 1).

These authors feel the need to explain why they are moving away from the accepted research questions that have been pursued in child care and development research for the past forty years. These have been:

Is day care harmful to children? Is it damaging to the development of children for persons other than their mothers to be extensively involved in child care, especially during the first months of life? (McGurk, Caplan, Hennessy and Moss, 1993:11).
A discussion of why these have been the dominant questions in child-care research is explored by researchers like McGurk et al (1993) as the main waves of research have not lead to conclusions that can be implemented in design or practice in early childhood centres, nor helped to allay parental anxiety about non-parental care in the early years. In the 1990s there has been the recognition of the need for an extension of the research agenda (Silverstein, 1991). In response to this recognised need there have been a number of detailed studies of children’s experiences of context. Leavitt’s (1991) thesis, on infants and toddlers in day care, is an example, and was an openended inquiry that asked the question “What is the nature of the lived experiences for infants and toddlers in day care centres?” (p. 24). Since then other studies have followed using small numbers and studying aspects of everyday experiences of young children and caregivers in detail (Elfer and Selleck, in progress, Dalli, 1999, Pramling and Lindahl, 1994, Wolf, 1994). The present thesis is situated within this framework.

**METHOD**

The thesis is looking at infants communicating with others and developing the use of conventional language codes as a reflection of their understanding of everyday actions within the child care centre. It is a study of children in a specific context with a view to being able to link characteristics of group care in our society to aspects of daily experience. This emphasis is based on the idea that development cannot be separated from context and that language is central to cultural knowledge and cognition. As stated the aim is to interpret these experiences and discuss the child-care centre as a developmental niche (Cole, 1998, 1996; Valsiner, 1987; Super and Harkness, 1986).

**Sample**

*The participants*

Two long day care centres.

Two child care centres were chosen. These centres are the same size, in relation to numbers of children enrolled. Both are 60 place centres. The centres are community based, required to comply with NSW regulations and both have three years Accreditation (NCAC, 1993). Both centres were purpose built in the mid 1990s, opened in 1995, and therefore both have been developed within the same historical period in relation to beliefs about child-care and best practice. Each has similar staffing provision and reflect current practice in relation to training, ratios and shift patterns. In both instances the staff leader in the nursery is a trained teacher. Both centres have a significant number of children from culturally and linguistically diverse backgrounds. Each centre has been studied as a stand alone case study. It is expected common themes about practice, infant care and child development will emerge.
Two infants
An infant in each centre was selected to be observed over a period of eighteen months. The children were six months of age when filming commenced and observations were halted on, or near, their second birthday. Staff were asked to select a child and were given a short list of criteria. Criteria included the following. It was essential that the families were not likely to leave the centre. Except for relatives no other care arrangements were used. The children both came from backgrounds where English was spoken as the first, and only, language. The age of the child was also a necessary criterion. In the first centre the child was a female, in the second centre the child was male. Both had the same name and have been called S1 and S2 in the transcripts and discussions.

Procedures
Data collection
Primary information was in the form of video sequences that were filmed once a month for a period of twenty minutes. The infants were observed in situ from six months to twenty four months.

Video material was chosen as being useful for naturalistic data collection. If everyday events are being observed and recorded then the use of a video means the data is retrievable and can be re-visited over and over in order to carry out a microanalysis of events. This was necessary as the children being recorded were pre-verbal and most of the data being analysed presented as instances of non-verbal communication. Therefore actions, expressions and attentional sequences needed to be accessible to the researcher. Another advantage of the video recording is that it is not selective, data collected is non-discriminatory, has reliability and can be used for multiple interpretations (Bennett-Kastnored 1988). The video camera also captures the context of the communication (Harris, 1992) and is considered to be relatively neutral and comprehensive. Benett-Kastnored (1988) says this is a method that "has the potential for making analysis of observed phenomena highly reliable" (p. 65). Perera (1994) has said the increased use of video taped data "has strengthened the validity of studies of early language" (p. 2).

A drawback to videoing can be the reaction subjects have to the presence of the camera (Bennett-Kastnored, 1988). This was approached in two ways in the present study. One was that time was given to visiting the nurseries so the children did not just equate the observer with a camera but also as a visitor who was available to play and communicate. In the case of the first centre it was possible to visit each week and videoing was carried out every second week. This was changed in the second centre to visiting before and after filming. In relation to staff there was an initial reaction, especially in the first centre, that presented as a tendency to speak quietly and try to stay out of the way of the camera. This problem was resolved by discussing the project. The second centre is a research centre and the children and
adults are familiar with staff and other researchers using cameras frequently. Another drawback is time (Wells, 1986). Transcribing detailed and useful information from video records is an onerous task.

Secondary information was collected through discussion and formal arrangements for staff to transcribe and explain video material. Staff also gave access to enrolment information, written staff observations and plans for the child and copies of relevant documents about the centres generally. For example, written philosophy, parent handbook and policies and procedures manuals.

**Transcription**

As the language focus is shared referencing and intentional action the literature on joint attentional sequences was referred to (eg. Moore and Dunham, 1995; Bruner, 1983). Children’s communicative competence within the setting was the developmental focus across the time of the observations. To maintain integrity the literature review was revisited and the theory of mind literature (Frye and Moore, 1991) provided the transcription format. A detailed example is given later in the paper.

Each video segment has been transcribed into communicative language acts as described previously using the triangle suggested by Lock (1980) and adding the conventional codes and cultural circles suggested by Adamson and McArthur (1995).

The infants' joint attentional experiences have been described and also recorded on a table to show the infants' growing competence. The caregiver use of the environment and routines and rituals occurring in each video have been described. The transcriptions have been coded into three behavioural indices suggested by Bates, Benigni, Camaioni and Volterra (1979). These are gaze alteration, ritualization of previously instrumental gestures and repair of failed messages. Pointing as a referential act (Desrochers, Morisette and Ricard, 1995) has been added for S1 as her use of pointing was very marked. The children’s use of vocalisations was recorded and labelled according to Halliday’s classifications for prototype language (1975).

**Example of video data**

An example of an attempt to repair a failed message is given here. The paper provides comments on this one incident to indicate the possible levels of meaning that can be extrapolated from the data.

Using the work of Bates et al (1979), Bretherton (1991) gave this definition of repair of failed messages:

> If the addressee does not respond in the intended manner, infants frequently augment the intensity of the communicative behaviour or substitute a new gesture for the first, as
if to clarify the message. This substitution of means is an especially telling index of

Changes with gestural messages in the first year could be expected to include
repetitions, additional information or even a substitute message (Golinkoff, in

These episodes may be very important in the child’s developing sense of self and
others. Leavitt (1991) discusses the importance of attempting to understand the
“language of gestures” (p. 91) and suggests that if the child is repeatedly
misunderstood then their image of themselves and their perception of their role and
position in the world they are beginning to construct will suffer. If Bronfenbrenner’s
(1979) systems model is considered and the caregiver is the third party then the
developmental process could be seen to be disrupted.

Transcription of S2 (15 months and 4 days) asking for a drink
Acts 81 - 185. Only the communicative acts that refer to the failed message are
recorded here.
The setting
The infants are sitting at a table for morning tea. There are four children at the table,
S2, C, O and A, and a child, T, in a high chair. Another child, Ka, is in the sandpit
nearby. S2 is drinking milk. C7 is the seventh caregiver that has been observed in
the months that filming has occurred. Actions are in brackets and vocalisations are
out of brackets.

81. S2 (Gets a grip on his cup with one hand. Puts the cup to his mouth, tilts his
head back and drains the cup).
84. S2 Eh (Sounds pleased. Puts his empty cup down on the table).
87. S2 (Realises his cup is empty and looks at C7. He pats his cup with a worried
look on his face).
130. C7 (Turning to S2) Where’s your drink?
131. S2 (Turns and points at C’s cup of milk).
132. C7 (Picks up S2’s empty cup without realising it is his).
133. S2 (Turns and sees C7 with his empty cup) oo gaggi (hold out his hand
towards the cup).
136. S2 (Keeps reaching for his cup as it is taken away. Looks around for another.
Looks on the ground). Oo ga.
142. S2 ( Watches C7 walk away with the cup).
145. S2 (Turns and thumps his hands on the table in front of him. Opens his mouth
as if to vocalise and coughs twice).
166. S2 Dae dae (points at the raisin toast in the middle of the table, there are clean
face flannels just behind the toast).
167. C7 You want some more toast or you want to wash your hands? (Takes tongs
to give S2 more toast, sees he has a full slice so hands him a clean flannel).
175. S1 (Has been waiting and he now points to the middle of the table again) oh baba, dar dar (in a loud voice).
179. C7 (Removes S2’s bib).
183. C7 Oh T (wiping S2’s face).
184. S2 (Puts his tongue against the flannel while has face is washed).
185. C7 There you go (picks up S2, off the chair, and sets him on the ground facing the playground).

Discussion of the transcript

All incidents of repairs of failed messages were recorded on a chart so any emerging patterns could be observed. All incidents were also described. The example transcript is reported on a summary chart and also descriptive information is given. One line of the summary chart is shown (see below). The chart shows S2’s age in months, the number of incidents of failed messages that S2 attempted to repair and the number of strategies S2 used for the attempted repair. The last three columns give information on the success of the repair strategies, whether the zone of free movement supported this success and who was promoting the particular message or activity.

Example of this incident on the summary chart.

<table>
<thead>
<tr>
<th>Ob.</th>
<th>Age</th>
<th>No. of incidents</th>
<th>No. of messages</th>
<th>No. of strategies</th>
<th>Success</th>
<th>ZFM</th>
<th>ZPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>15m</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>N</td>
<td>Y</td>
<td>NC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>13</td>
<td>8</td>
<td>?</td>
<td>N</td>
<td>NC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>12</td>
<td>6</td>
<td>N</td>
<td>Y</td>
<td>YA &amp; C</td>
</tr>
</tbody>
</table>

The chart indicates that this was the eighth video clip transcribed and S2 was fifteen months. There were three instances of attempted repairs at failed messages across the twenty minute observation time. The one described here is incident three. S2 gave twelve messages to try to communicate with C7. He used six strategies. The message was not successful. Given the setting and the objects present the zone of free movement was contextualised enough to support the message. There was a zone of promoted activity, which was the consumption of food and drink for morning tea, and both adult and child were exchanging communications within this zone.

Descriptive comment on S2’s repair of a failed message

In these actions S2 has been trying to clarify his message of wanting more milk. He has shown himself to be adept at repetition, adding information and even using a substitute message. Twice he has repeated his message. There are eight instances where he has added information and in each has also tried to give a substitute message. His strategies range from initial satisfaction (84) to showing
concern through facial expression (87) and uses gestures (87) and gaze direction (87) to indicate the subject of his concern is his cup. When the caregiver asks where his drink is (130) he tries to answer the question and express his need at the same time. This is done by pointing at C's cup which still has milk in it (131). A short time later he uses two strategies at the same time by vocalising and using a hand grasp gesture (133). He clearly discriminates between pointing and grasping as two different messages are conveyed with these gestures. Pointing is used to try to signal “I want” (166) and grasping is used towards his own cup in the sense that “that’s mine” (136). He follows the caregiver with his gaze (142) and a short time later follows this with a thump on the table (145). He tries a vocalisation and a point (166). The caregiver responds but with the wrong answer. The expression on S2's face clearly indicates this is not what he wanted and he tries again. He does not get a drink and is taken from the table.

Discussion
A significant implication that emerges from observations of repair of failed messages is the number of repairs that were unsuccessful. The notion of repair of failed messages would suggest that the child realises the original message is not successful and repeats the message, or changes the form of communication, to successfully communicate with the other actor. This success was not realised in the present case, nor in many of the observations like this one. S2 showed persistence and competence in the use of a large variety of communicative strategies. A recurring pattern throughout the observation on repair of failed messages was that many happened within the context of routines. Routines played a dominant role in S2's day. Rogoff (1993) and Valsiner (1987) have both observed the role of these everyday activities in the child's developing cultural understanding.

Implications
Detailed knowledge of infants' communicative abilities and the cultural and social messages that lie in actions and arrangements of physical environments will have implications for those who design and provide child care for the very young. Issues of quality in child care have been investigated for many years (Ochiltree, 1994). As research on quality has grown the realisation of the complexity of the topic has correspondingly grown (Dahlberg et al, 1999, Doherty-Derkowski, 1995). This thesis can help to inform practitioners and teachers of the role of culture in development and their own role as members of the culture. Awareness of context and culture as development (Cole, 1998) puts a new emphasis on interpersonal relations during everyday encounters like meal-times. This present example shows a child striving to communicate basic needs to an adult within a highly structured and conventional situation. Relationships, listening to children and the role of routines as liberating, or controlling can all be questioned.
CONCLUSION

The paper has given a brief overview of what this thesis is attempting to do. That is, to identify and describe social and cultural characteristics of the long day care centre and how these relate to infants’ daily experiences and relationships within the setting. The methodological framework and the methods chosen have sought integrity within the discipline of early childhood education and therefore aims, methods and discussion are philosophically consistent with a wholistic view of development. The example of one incident has highlighted implications about beliefs, design and organisation of routines in group care settings.

REFERENCES


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