

## **“I CAUGHT YOUR EYE, I CATCHED YOUR TEETH”: DISTRIBUTED PLAYFULNESS CONNECTING CHILDREN**

### **ABSTRACT**

This paper explores how playful activity mediates and connects children as “mind” becomes distributed across individuals (Rogoff, 1998; Salomon, 1993; Tomasello et al. 2005). “Mind” includes consciousness, cognition, emotion and imagination. Children’s playful communication is mediated and distributed via words, sounds, gestures, gaze, posture, rhythm, and movement using a variety of strategies including imitation and repetition. Socio-cultural historical activity theory informs both the methodological paradigm of the research and the framework for data analysis (Chaiklin, 2001; Cole, 1996; Engeström, 1999; Vygotsky, 1986, 1978; Wertsch, 1998). Findings suggest that understanding children’s mediated and distributed relationships with others is central to understanding children in early childhood settings. Distributed understandings of mind have pedagogical implications for how teachers view children in early childhood centre communities, and for curriculum and assessment practices.

Keywords: playfulness, cultural historical activity theory, distributed mind

### **INTRODUCTION**

This paper developed out of research exploring young children’s playful and humorous communication in early childhood settings (Alcock, 2006). That research focused on playful communication between children rather than playfulness as an individual trait. This interactive focus raised questions about the social nature of concepts of mind such as consciousness, cognition, and imagination in children’s communicated playfulness because to the observing researcher young children communicating playfully were connected. In a sense their minds seemed to become one with the environment and each other. Mind (consciousness, cognition, emotion and imagination) became shared or “distributed” (Salomon, 1993) across children as they engaged in playful communication together.

Within psychology, cognition, consciousness and imagination have traditionally been treated as belonging to individual subjects and developing from within as the individual develops and grows (Freud, 1916; Piaget, 1962). However from a socio-cultural perspective individual development emerges through social participation in societally mediated activities; all activity, including (playful) communication is artefact mediated (Bruner, 1986; Chaiklin, 2001; Cole, 1996; El’konin, 2000; Vygotsky, 1978, 1986; Rogoff, 1998).

Artefacts include both material and non-material signs, symbols and tools that mediate representation in various ways (Wartofsky, 1979). Artefacts are socially, culturally, and historically constructed and therefore embody aspects of this socio-cultural world. Thus artifacts have been described as "the linchpin of cultural mediation" (Cole, 1996, p.122) because they connect people while mediating development and transformation at both individual micro levels and societal macro levels of change. It follows that individual psychological development is ultimately social, distributed, and complexly connected to others and the wider universe via artefacts.

This paper further explores this social and connected nature of mind (specifically the distributed and collaborative nature of mind, including cognition, consciousness, emotion and imagination) in young children's playful communication.

Psychological researchers, including socio-cultural researchers, have tended to focus on cognition when referring to "mind", rather than on related aspects of mind such as imagination, consciousness, and feeling-emotion. For example Rogoff (1998) refers to cognition as a "collaborative process" and Salomon (1993) explains how cognition is distributed because:

...what characterizes such daily events of thinking is that the social and artificial surrounds, alleged to be "outside" the individual's heads, not only are the sources of stimulation and guidance but are actually *vehicles of thought*. Moreover, the arrangements, functions, and structures of these surrounds change in the process to become genuine *parts of the learning* that results from the cognitive partnership with them. In other words, it is not just the "person-solo" who learns, but the "person-plus", the whole system of inter-related factors. (p. xiii)

This writer has described the phenomenon of young children playfully sharing their imaginative ideas as "distributed imagination" (Alcock, 2006). Imagination too is essentially cognitive because imagination is integral to abstract thinking as pointed out by Vygotsky (1978). The phrase "situated learning" (Kirshner & Whitson, 1997), also describes cognitive processes.

However, as Bruner (1986) eloquently points out emotion is always integral to cognition. Referring to the unity in emotion, cognition and action he writes:

...all three terms are abstractions, abstractions that have a high theoretical cost. The price we pay for such abstractions is to lose sight of their structural interdependence. At whatever level we look. However detailed the analysis, the three are constituents of a unified whole. To isolate each is like studying the planes of a crystal separately, losing sight of the crystal that gives them being (p. 118).

From a neuroscientific perspective Damasio (1999) and Siegel (1999) add further weight to this understanding of integrated emotion and cognition. The events in the wider study (Alcock, 2006) and in this paper exemplify these complex connections between feeling, thinking, imagination, and consciousness within and across children engaged in playful communicative activity.

The events presented in this paper (and the wider study, Alcock, 2006) suggest that distributed mind and intersubjectivity are similar concepts, but while intersubjectivity involves individuals (subjects) having a shared focus and being in tune with each other, distributed mind involves individuals also connected by a shared focus, but possibly on different wave-lengths, so interpreting the shared situation in diverse ways. Just as Goncu (1993) suggests that intersubjectivity is a feature of young children's play this writer suggests that distributed mind is also what happens when children communicate playfully. The important point, from a socio-cultural perspective, is that both intersubjectivity and distributed mind are artefact-mediated states of sharing, distributing, communicating, and connecting with others.

After explaining the theoretical framework of the study, three typical events - of young children communicating playfully - are presented. These illustrate distributed mind in action. Analyses follow each event, and an overall discussion follows all events; the concept of distributed mind is discussed alongside related concepts and with reference to literature.

### **Cultural historical activity theory (CHAT)**

The CHAT framework for analysis used in this study prioritises the artefact mediated nature of communication (Cole, 1996; Engeström, 1999; Vygotsky, 1978; Wertsch, 1998). Artefact-mediated activity presented as "events" is the unit of analysis. This focus on activity, as a unit, ensures that the parts remain connected to the whole; activity is not reduced to an assemblage of static separate elements that can misrepresent the wholeness and dynamism of the activity.

The elements that complicate and mediate the relationships in the activity system include: artefacts, rules, roles, and the community of the involved participants (Engeström, 1987, 1999). As mentioned mediating artefacts include tools, semiotic signs and symbols (Wartofsky, 1979), and can also include people. Artefacts can be simultaneously material and conceptual, the main point being that all relationships are artefact-mediated (Cole, 1966; Vygotsky, 1978), and that relationships between the components of activity are complex, changing and contradictory. The artefact-mediated nature of these relationships is explored in the data analyses.

The dynamics of the relationships are in continual flux, like the usual seemingly chaotic patterns in children's play. Activity, like play, is never static, and the activity unites the diversity that is inherent in play. Activity is a complex,

dialogical and dialectical process where artefacts, rules, roles, community and players undergo transformations in accordance with the changing and motivating direction and aims of the activity. Activity theory prioritises the contradictory, ever-changing, and mediated nature of activity (and of playfulness), thereby enabling systematic and manageable analysis of events of children having fun together. A CHAT analysis illuminates how the tensions and contradictions in the mediated relationships motivate, sustain and distribute communicative activity.

### **Method**

The design of this study was inspired by the naturalistic and ecological field work methods of ethnographic research (Chambers, 2000; Tedlock, 2000). Three early childhood centres were involved in the wider study (Alcock, 2006). All three centres were purposely selected to reflect a range of early childhood centre types. They were also self-selected in that the staff were keen to participate in a project about humour and playfulness. Over a one year period the researcher spent 110 hours observing children being playful in the three centres. She also made casual visits as part of the process of building and maintaining relationships with children, teachers and families. This paper presents data from two centres: Northbridge, which the researcher visited on 25 occasions, for a total of 50 hours spread over the year, and Southbridge which the researcher visited on 12 occasions spread over 6 months. Visits at Southbridge were of 2-3 hours duration and at Northbridge they were 1-3 hours long. Both centres were community based. Northbridge was a full-day child care centre with children from birth to school age. Southbridge was sessional with mainly four year old children attending the morning sessions which were part of this study.

Ethical consent for carrying out the research was obtained from a university human ethics committee. Signed consent for all data-gathering was obtained from all staff, and from parents on behalf of their children. Where possible and appropriate, children also gave verbal consent to being observed.

Tools used for gathering and generating data consisted of the researcher as a participant observer; her observations were aided by technological tools including a small video camera, a laptop computer, and occasionally an audio cassette recorder. The children were familiar with staff video-taping them, so were relaxed in the presence of the equipment.

The original typed field notes, which included the video transcript notes, were divided into four columns: one for date, time, place and similar conditions; another for observations; the next for interpretation; and the fourth listed the material mediating artefacts. This list of material artefacts was important in using a CHAT model which prioritises artefact mediation.

Inductive data analysis occurred as data were generated. The initial descriptive analysis accompanied the construction of a data record; the process included: dating, filing, and re-filing observation notes, transcripts and tapes, and making

copies of everything (on computer discs, video and cassette tapes) for safe-keeping.

Theoretical analysis analyses developed out of descriptive analyses including repeated viewings of the video footage, multiple re-readings of observation and video transcripts, reflecting and ruminating over memos (writing more) and looking for paradoxes, gaps, and contrasts in the data (Delamont, 2002). It was at the level of theoretical analysis (Pollard, 1996), that the CHAT framework developed for interpreting events was most useful. Thus the analyses involved identifying the motivating aim of the playful event, and exploring how that aim changed during the play. This process also led to further exploring the mediated nature of the interactions between the elements of the activity and to identifying contradictions in these interactions.

This analytical process was simultaneously informed by ongoing and extensive reading of related literature. Together, the data and the literature provided substance for theoretical reflection, ensuring that data was interpreted reflectively and holistically, rather than simply categorically and technically (Denzin & Lincoln, 2000; Schwandt, 2000).

Themes around playfulness and humour were identified from patterns and regularities, including contradictions, contrasts, and paradoxes in the data. These themes were compared across and within centres as a form of cross-checking the primary data.

Prominent themes in the data were then collated as a series of "playful events" that illuminated these themes and drew on narrative methodology to frame them (Bruner 1986; Clandinin & Connelly 2000; Coles, 1989; Polkinghorne, 1988). Tedlock (2000) emphasises the importance of narrative ways of representing field-work data for creating unity and meaning out of data while avoiding simplistic and artificial categorising of wholes into parts. The use of narrative structures avoids reductionism, thus acknowledging the diversity and complexities inherent in humour and playfulness, while portraying unity in the activity of the event. Events are one way of illuminating the diversity in interpretations and experiences of humour and playfulness, while representing children's experiences authentically. As with frame play (described by Goffman, 1974, and Bateson, 1972), these events had observable beginnings and ends, though they were sometimes not apparent until the whole event was analysed.

The criteria for deciding that events were "playful and humorous" overlapped. Playfulness and humour overlap as pointed out by Apte, 1985; Garvey, 1977; Kline, 2003; Sherman, 1975). According to Bergen (2003) humour and playfulness are intertwined in children's development. Lieberman (1966) and Barnett (1991) have suggested broad dimensions as indicators of individual children's playfulness in the playfulness scales that they developed. In this study these dimensions were applied to children's interactions and communication

styles, rather than to individual children. Such dimensions helped in categorising events as playful and humorous. The dimensions used were: physical spontaneity, (e.g. body language and physical activity that speaks playfully) social spontaneity (e.g. ease in playful communication), cognitive spontaneity (e.g. imaginative and word play), manifest joy (enjoyment) and sense of humour (e.g. being funny, teasing, and appreciating humour).

Congruence between the diversity of the research methods (narrative method and CHAT frameworks) and the diversity inherent in the research topic (multiple understandings of humour and playfulness) contributed to overall research validity. Thus, narrative and CHAT frameworks were combined as tools for analysing and interpreting the data generated in an attempt to understand the diversity of young children's experiences of humour and playfulness in their communication. The use of both CHAT and narrative methods provided triangulation that added breadth and depth to the analyses. Both qualitative methods were also congruent with the research topic: humour and playfulness are not statistical concepts but qualitative states.

Questions that arose from the data and prompted this paper include: How are these individual children connected? What mediates these connections? Does playfulness mediate distributed mind and connectedness? It is suggested that the concept of distributed mind has implications for how all the participants in early childhood settings - families, teachers and young children - are viewed in relation to each other.

### **Event: Contagious laughter**

Background: Southbridge, outside. Beside the wood-work table, three four year old boys have built catapult contraptions which operate by jumping on one end of the plank of wood which is balanced on a fulcrum in the middle (like a see-saw). The other end then flicks up and sends flying the objects (bottle tops) balanced on it. None of the children has English as a first language, and only Lau speaks some English, Ali and Mal being recent immigrants. Lau is from Iraq and Ali and Mal are from Somalia. Today was Ali's first morning session. He had been attending the afternoon sessions with younger children.

Ali arranges 3 bottle tops on one end of the plank.

Mal gives high pitched squeaks as he sees Ali do this. Mal then fetches two more bottle tops, which are lying nearby on the ground, (possibly they've fallen off the nearby carpentry table).

Lau is also watching: "Uh ooh"

Meanwhile Ali uses one leg to stamp firmly on the upright end of the plank, sending the 3 bottle tops flying; he laughs, Mal giggles and watches. Ali repeats the jump three times and the hysterical laughter increases with each jumping turn. The three boys' glances at each other seem to increase their glee as they bend over helplessly in the grip of their loud laughter. No words are spoken. Their togetherness is expressed physically in quick large body movements,

shared gaze and loud laughter involving muscles tensing and relaxing the whole body. They move synchronously, as if united, connected together.  
(Southbridge, 2.11.2000)

### **Analysis: Laughter as communication**

These children were totally involved in the activity of catapulting bottle tops to see how far they could fly. They were connected intersubjectively by both the activity and their laughter. The inherently humorous (and contradictory) nature of the activity contributed to the tension which in turn motivated the continued activity as a system. Wooden planks and bottle tops mediated the activity on a material level. Laughter, gaze, gestures further mediated and connected the children, so that consciousness, imaginations, mind became distributed across the three players.

The children moved synchronously and hysterically together communicating intercorporeally (Merleau-Ponty, 1962). Laughter mediated, energised, and increased the motivation to play. Over thirty years ago Sherman (1975) described this commonly observed phenomenon of shared hysteria in children's play as "group glee". This event, like other events in the wider study, (Alcock, 2006) suggests that group glee may be understood as a form of distributed mind; these children were consciously connected in playful activity. Engeström's (1999) analysis of how the motivation and tension in activity systems reflects "multi-voicedness coexisting with monism" (p. 20) describes the unity that also included linguistic diversity in this self-sustaining group activity.

Children's emotional and cognitive selves were integrated in this playful activity. The three boys seemed to become one unit of activity, connected in their dance-like movements by roles that possibly reflected their common historical and ethnic cultures, religion and gender. Laughter, with associated body expressions (Merleau-Ponty, 1962), connected them despite, or instead of, a common spoken language.

The researcher found it difficult not to laugh also. She wondered if these children, with no spoken language in common, were instead using laughter as a means of communicating with voice sounds as well as with bodies. She had observed this group of boys being similarly gleeful on several occasions. Therefore the researcher decided to ask the teachers how they interpreted this very playful behaviour.

Teacher Cath: "Yes, they laugh as a way of talking. That's where humour's great, because it breaks down the barriers... These children are all Muslim and all play together, yet they speak three different languages" (Interview, 2.11.2000).

Flying bottle tops and laughter mediated this play materially and symbolically. Words are another form of symbolic tool that also mediate and connect players. Words are tools for thinking (Vygotsky, 1986), so too are numbers. In the following two scenarios children playfully constructed narrative play with numbers, anticipating both word meanings and number order, and distributing this consciousness across the group.

### **Event: Numbers in narratives (a and b)**

Background:

Northbridge. Two events (A and B), spaced one hour apart, involve the following children: Ema (3 years, 11 months), Tom (4 years, 8 months), Peta (4 years, 4 months), Shona (2 years, 10 months).

In scenario A it is early morning (8.30 am). Children are still arriving. A mini-trampoline is set up in one room and three children gently jump on it together.

**(a):**

Ema: "And September's my birthday."  
 Tom: "And you know what, I'll be 5 when you're 4."  
 Peta: "When you're...I'll be..."  
 Ema: "6, I'm 5."  
 Tom: "No when I'm 6 you'll be 5."  
 Peta: "When Ema's 4 I'm going to still be older than you."  
 Tom: "No Peta, cause there's a boy in Sydney and he's 7 so he's 3 years older than you..."

[All fall off trampoline and laugh].

(28.08.2000)

### **Analysis: Numbers mediating intersubjectivity**

This discussion, initiated by one child (Tom) continued. Numbers, as artefacts, mediated communication: they contributed to an intersubjective focus of attention for all three (later four) children. Tom cleverly integrated his interest in numbers with Ema's remark about her birthday. Then, using the words and structure of numbers, age, and birthdays the children co-constructed this dialogic event, based on a sharing of the individual experiences of Tom and Ema and the knowledge and interests of all three players. Tom revisited this counting-subtracting play several times that morning, as well as on other occasions. Individual children used and interpreted numbers in different ways, but as shared artefacts the numbers mediated and connected the children.

**(b):**

The children lie on the floor near the trampoline (9.30 am).

Tom: "when Sarah (mother) was born Dad was 1, when ...."  
 Peta: "I caught your eye."

Ema: "I caught your teeth."  
 Tom: "One day we were cooking marshmallows in the fire and you know what I had 12 marshmallows."  
 Peta: "I had 21."  
 Ema: "I ate 20-60."  
 Shona "I can't count."  
 Tom: "I can count to 100."

Tom starts counting and keeps going to 100 without stopping. For a short while Shona counts on her fingers beside him.  
 (28.08.2000)

### **Analysis: Distributing cognition playfully**

Ema and Peta caught Tom's enthusiasm and number word play became distributed across this group of children. While Tom played with numbers seriously, the others playfully upped the ante in counting, a phenomenon also noted by Varga (2000) in children's play with words. Tom's "twelve" was recycled as "twenty-one", and as "twenty-sixty". This type of recycled repetition of an earlier speaker's last lines, with slight twists, was frequently observed in children's play with words and numbers. Such repetition (as opposed to straight copying) is important for distributing, sharing, and learning concepts (Vygotsky, 1986; El'koninova, 2001).

Ema and Peta also played imaginatively and amusingly with words, "catching" teeth, as well as eyes, in a literal variation of the "I caught your eye" idiom. Physical materials and the sharing of individual imaginations mediated this playfulness. Imagination is integral to abstract thinking. Words, number knowledge, and past experiences mediated communication and distributed cognition – mind - across the players. In this randomly dialogic way interest and awareness of numbers became a shared group interest, leading to playful practice with numbers, and it is likely that this practice helped the children's proficiency with numeracy as well as with words.

## **DISCUSSION**

### **Distributed mind, imagination, consciousness, intersubjectivity, and intercorporeity**

The events above exemplify the social nature of "mind", specifically when young children are being playful together. "Mind" in this sense includes emotion, cognition, consciousness, and imagination - qualities which are usually ascribed to individuals. The presence of bottle-tops, wood planks, and the freedom to play with these materials, mediated and situated the boys hilarious catapult activity within the context of an accepting community. Similarly the freedom to play with words and related number concepts mediated and distributed playfulness across

the players with the consequent sharing of number and word concepts. In both events mind became distributed across the group of children being playful together.

“Distributed mind” emphasises movement. It incorporates a view of communication as a continuously emergent, dynamic, and dialogic process (Fogel, 1993). Individuals do not stand apart, watching while communicating; instead individuals are integral to the continuous communication process (Fogel, 1993).

Children playing together develop shared understandings through sharing ideas, feelings, and experiences intersubjectively (Goncu, 1993). Individual minds become distributed across the players. This intersubjective communication of young children being playful is expressed physically in their bodies, mediated by signs which include gaze, body movements, sounds, voice and other artefacts. “Intercorporeity” as described by Merleau-Ponty (1962) is a similar concept to “intersubjectivity”, with the emphasis on physically embodied minds - body language - connecting children intersubjectively. Intercorporeity stands out in these events of children using their bodies to express their minds.

### **Repetition, imitation, anticipation: strategies in distributing and connecting minds**

Numerous signs and strategies are used in communication. Repetition and imitation are two strategies commonly used a lot by young children in their play (El’Koninova, 2001; Piaget, 1962). From a socio-cultural Vygotskian (1978) perspective, repetition and imitation are basic ways in which children internalise meanings and concepts and learn about the external world (El’konin, 2000; Elkoninova, 2001). Accordingly children playing roles are also imitating aspects of the roles they have observed around them and in this way learning aspects of the wider culture. Imitation in this sense is not simple copying, but appropriation where children are actively developing understandings of aspects of the roles being imitated while simultaneously negotiating the context and contents of the play (Trawick-Smith, 1998). External concepts associated with roles played gradually acquire internalised sense and meaning. Concepts include feelings and ways of thinking. The repetitive and imitative activity of play mediates children’s developing understandings of the adult world as they play what they have seen, heard, and felt. The children in the events presented here played spontaneously, repetitively and imitatively with words, numbers and catapulting bottle tops.

According to Vygotsky (1978) more focused and motivated school based learning develops out of this spontaneous early childhood playfulness; children develop motivation for learning through opportunities for play with objects and concepts. They begin to develop “scientific concepts” from “spontaneous concepts” (Vygotsky 1986). The boys catapulting bottle-tops may have been learning rudimentary physics while also relating intersubjectively, gleefully, and joyfully.

Within functional linguistics imitation is also described as a convergent metacommunicative strategy used by young children to sustain play (Fogel, 1993).

Children collaborating, relating intersubjectively, and constructing shared goals and intentions as they play are learning the “skills of cultural cognition” (Tomasello, Carpenter, Call, Behne, & Moll, 2005, p 676). They are appropriating and re-creating their culture socially. The children playing with numbers were learning the meanings of words and numbers while sharing – distributing - their different understandings.

The narrative-like themes which frequently motivate children’s distributed playfulness reflect their everyday cultural experiences. When children play with narrative themes they are also learning (through imitation and repetition) event scripts – i.e. knowledge patterns that are culturally, socially, and historically prescribed and become generalised models in the developing minds of children, for abstractly organising and understanding the social world (Nelson, 1996). Such scripts and schema may function as mediating artefacts in children’s playful and culturally situated communication (Cole, 1996). The children in these events played out scripts around birthdays, growing older, learning to count, and creating humour.

Though much playful communication was sign-mediated using bodies as artefacts, words - even a few - did add cognitive complexity to children’s narratives. Words opened imaginations and mediated the sharing of individual consciousness. Words added cognitive complexity to narratives by enhancing the emotional and social as well as the cognitive aspects of children’s playful communication. Children’s different understandings of numbers created contradictions which sustained and motivated their playful activity.

Anticipation is an implicit feature in children’s communication (Shotter, 1993). The ability to anticipate each other in the moment made communication meaningful in these events. Children read signs in each other’s movements and gestures, voice tone and gaze, as well as in the words already spoken. Playful (as opposed to more serious) communication seemed to be associated with flexibility, spontaneity and improvisation. What was anticipated was not predetermined, but emerged in the course of the playful activity. In the same emergent way individual minds became distributed across the players as a group.

### **Implications and research**

For the children, links with the wider community and between their families and the centre were expressed in how and what they played at (including the motivation to play). Experiences from home and places outside the early childhood centre prompted communication in the centre. From El’konin’s (2000) perspective, the re-creation of aspects of the adult world is the main function of

play. These events and the wider study (Alcock, 2006) suggest that, aside from such utilitarian functions, togetherness and enjoyment may also be important reasons for children being playful together.

Connections between children and between feeling and thinking are only beginning to be addressed in the psychological research literature. The group dynamics of these connections, with children communicating emotionally and cognitively while having fun together, were features in the events above and in the wider study (Alcock, 2006). In affirming the scientific basis of integrating feeling with thinking Siegel (1999) writes: "Creating artificial or didactic boundaries between thought and emotion obscures the experiential and neurobiological reality of their inseparable nature" (p. 159). Similarly, creating boundaries between individual children playing together by focusing on individuals alone obscures the togetherness of the activity and blinds us to "the pattern that connects" Bateson (1972). A view of children connected in activity has implications for curriculum and assessment practices also reflecting this connected perspective.

There is a dearth of naturalistic research exploring how and why young children in early childhood centre settings communicate and collaborate together. Most of the research carried out in such settings focuses on children individually, rather than on the nature of their relationships. Where relationships are emphasised these are usually within birth families. This neglect of relationships in early childhood centres is surprising, considering that increasing numbers of young children spend much of their time in early childhood centres. Early childhood centres are like extensions of the birth family - public families - for many children and their families. Consequently there is the need for more research looking at children's collaborative development in such "communities of practice" (Lave & Wenger, 1991). A research focus on activity provides a pragmatic method for studying relationships and collaboration in development by focusing on the artefact-mediated activity, rather than individual children, as the unit of analysis. CHAT can bring together both macro and micro views in the study of individuals in communities connected in historical, social, cultural contexts.

## **CONCLUSION**

Distributed mind was a common feature of children's distributed playful communication in these events as well as in the wider study (Alcock, 2006). The phenomenon of distributed mind explains the process whereby feelings and thoughts evolved and became distributed across individual minds, differently. Imagination, anticipation and consciousness were integral to this evolving process, influencing how children used artefacts (for example story scripts, numbers, words, bottle-tops and planks). Thus children's individual subjectivities evolved through activity as they intersubjectively shared their individual imaginations via playful communication. Thoughts and feelings – minds – became distributed across the children engaged in playful events.

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