Partners in play

In the third and final part of her series on schematic behaviour, **Dr Frances Atherton** explains how adults may accompany children in a conceptual way that supports them in their thinking...

Over the course of this series I have highlighted ways in which we can gain insights into children's thinking by observing them as they play. Following her observations of children's schematic behaviour, Chris Athey warned that "paying too much attention to content could prevent the perception of similarities of form". Therefore, when we observe young children, it is important to identify their schemas, their patterns of thinking, so that these can be cultivated and extended. Insights into children's intellectual activity can be gained if adults spend time coming to know what it is they are seeing, what children may be revealing about their thinking when they play. If this is the case, then a more relevant response is possible.

Accompanying young children in an appropriate way as they play is not about a concentration on what they are playing with; it is the content of their play and reacting to this that is the primary consideration. An altogether more subtle and nuanced challenge presents itself. Undoubtedly, young children deserve to be in surroundings that are full of possibility, and supporting them as they play by supplementing the physical resources to which they have access is part of this; however, in noticing repeated patterns of behaviour (schemas), and in taking account of these and allowing them to shape planning and intervention, adults are able to respond in a more meaningful way to children's personal interests. It is about responding in a way that matches what the children are thinking about, an involvement that complements their forms of thought.

Henry's 'back and forth' schema

Henry pushed a variety of toys along the floor – fire engines, trucks, trains, diggers and cars – in his exploration of horizontal movement. He selected objects from the environment, including a glockenspiel and pizza cutter, and outside pushed himself along on wheeled toys, bikes, scooters and cars. He kicked and rolled objects, and ran after them, repeating the process. Henry

could be seen using the things around him to pursue his form of thinking – his back and forth schema.

He spent time lining objects up, cars, animals and trains, and although these arrangements were static (a row of cars, a line of animals), Henry was actively involved in their composition as they required trajectory movement to create. He explored elongating and extending constructions, investigated starts and finishes, beginnings and ends, and adding to, removing and

connecting objects together through dynamic horizontal movements. As Henry pursued his schema, an understanding of concepts such as length, distance, addition, force, velocity and subtraction was beginning to evolve.

Later, Henry brushed paint across the paper and pushed the car back and forth through the paint. His use of side-to-side movements with the paint brush and car were further physical explorations of his dynamic back and forth schema. He was discerning in his use of the things around him in that his form of thought sensitised him to make preferred selections and use objects in certain ways. This reveals the relationship between what children select from the environment, how they use objects to hand, and their particular forms of thought.

Interpreting behaviour

Henry was observed playing with a toy steamroller on the car mat:

He said: "Near the home, round the corner, a big steamroller's here, nearly here, it's here."
The adult accompanying him said: "The steamroller's on the way to a job – along the road it goes."

As Henry pursued his back and forth schema, he used appropriate schematic-related speech – "steamroller" – with the adult accompanying him choosing particular language here when intervening in this play: "along the road it goes". To have joined Henry and contributed comments about the capabilities of steamrollers to flatten or squash would have been an associative connection, but to become involved in his play with conceptual language, related to his form of thinking, was a more relevant and fitting intervention.

To support Henry's thinking – his exploration of horizontal movement – the participation could have continued with focused, related language about levelness or straight planes, parallel lines, vehicles propelled or strolling along, as well as broadening with talk about ascending inclines or gradients, sloping obstacles and undulating surfaces. Used in context, perhaps with the careful addition of props, gently suggested through gesture or query, that supplement the activity, challenging language that corresponds with patterns of thought is evidence of a more attuned practitioner at work.

Where Henry pushed the toy steamroller around the mat saying "Here, nearly here, it's here", he appeared to have an awareness of time passing. The steamroller eventually arrived at its destination. It was not an abrupt incident but a measured unfolding. He also appeared to be exploring distance in a practical sense, in that he used vocabulary in this observation that suggested addition. He was pushing the steamroller a bit further (here), a bit further (nearly here), a bit further still (it's here). The arrival of the steamroller at the destination was dependent upon it being pushed. Through this functional dependency relationship, Henry seemed to be exploring the concept of additional distance. Further pushes, punctuated with language, eased the steamroller's progression, suggesting Henry was engaged with notions of distance, and movement.

Discerning thoughts

Cathy Nutbrown noted that it is through observation 'as they work' that a clearer view of young children's patterns of thought can be gained. The particular schematic nature of young children's behaviours may be discerned through alert observation, and this can lead to a more focused connection between adult and child.

Following his play on the mat with the toy steamroller, Henry made a steamroller with junk modelling resources. He appeared to be building upon his earlier horizontal trajectory behaviours and could be seen representing his back and forth schema in his actions, in the things he made and in the language he used:

Position – When Henry pushed the steamroller along the car mat, he might have been thinking *The steamroller can't go in a straight line on the car mat as the road bends. It's got to go round the corner.*

Force – When he pushed the steamroller, he might have been thinking *I've got to push the steamroller to make it move.*

Velocity – When he pushed the steamroller fast and slow, he might have been thinking *The faster I push the steamroller, the quicker it will reach the end of the road.*

Estimation – When he kept pushing the steamroller, he might have been thinking *I've got to keep pushing as I'm not at the end of the road yet.*

Direction – When he moved the steamroller forward, he might have been thinking *I'm pushing the steamroller forward. I hope I don't meet another car as I'll have to reverse.*

Friction – *When he moved the steamroller off the mat and onto the floor, he might have been thinking The car mat is rougher than the floor. I need to keep pushing so that it will move. If I put it on the floor and give it a push, it will roll on its own.*

Only through insightful observation are adults able to acquaint themselves with the fine distinctions of a child's thinking made known as they play. In so doing, there is an opportunity to respond in a more pertinent way to what is most significant for that individual. It is demanding of adults in that it requires a continuing, adapting and modifying approach to intervention in learning, but it can be richly fruitful in our efforts to nurture and support children's development.