

# Information processing & cognitive development

You are learning how to...	In the context of...
<ul style="list-style-type: none"> <li>• Draw conclusions from research studies</li> <li>• Use research findings to decide between competing theories</li> </ul>	<ul style="list-style-type: none"> <li>○ Information processing approaches to cognitive development</li> </ul>

## Chi (1978)

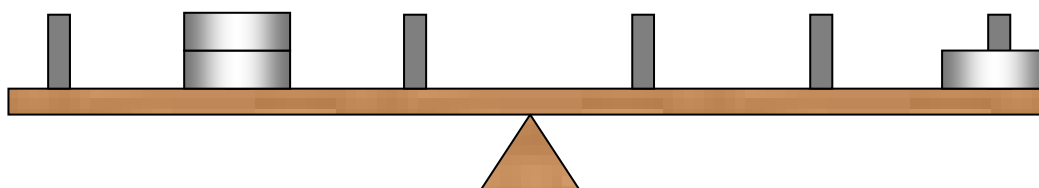
A comparison was made between children and adults. The children were experienced chess players and the adults were novices. They were given two tasks: (1) digit recall and (2) recall of chess board positions. The adults were significantly better at digit recall, but the children were better at recall of chess board positions.

## Bower (1979)

Young children were given a conservation task based on Piaget's conservation of liquid quantity task. Some were given the conventional version, using beakers of coloured liquid. Others were given a modified version where the beakers were filled with beads that the children were encouraged to count. Bower found that the children performed better on the modified version.

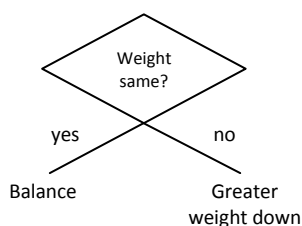
## Siegler (1976)

Children of different ages were given a task in which they were shown a balance scale with different weights placed at different points. They had to judge whether the scale would balance or come down on either side.

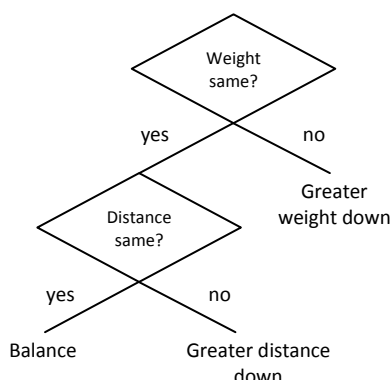


Siegler found that children of increasing ages used rules of increasing complexity to judge whether the scale would balance. He found a predictable logic to the rules they used e.g.

### Rule I (5 years)



### Rule II (9 years)



Five year olds only used the weight to make their judgements. Nine year olds took distance into account but only if the weights were the same. Thirteen year olds took weight and distance into account but if they conflicted (i.e. more weight on one side, greater distance on the other) resorted to guessing.

Siegler found that few 17 year olds were able to work out a rule that accurately predicted all possible circumstances and that ability to solve the balance problem was unrelated to ability to solve other problems.