Centre for Brain and Cognitive Development

THE SEQUENCES STUDY

There are lots of situations where babies need to detect patterns in their environment. Speech, for example, is a continuous stream of sounds and to have any chance of understanding it babies need to pick out the regularities that group certain sounds into words. Thus with experience they can tell that 'hello pretty baby' is most likely to be 'hello .. pretty .. baby' because the 'lopr' and 'tyba' are much less common combinations of sounds than 'hello' or 'baby'.

We already know that babies can learn how to separate these sounds very quickly. With just a couple of minutes listening, babies learn patterns in a sequence of nonsense syllables (rather like learning to pick out the words in the rapid 'babble' of a foreign language). When tested babies can tell the difference between these patterned sequences and random streams that use the same syllables.

The pictures above illustrate a visual version of this problem, where instead of syllables we use colourful shapes. One of these sequences is made up of pairs of shapes whilst the other is completely random. To you and me, it is not obvious which is which (answer overleaf). Yet even very young babies seem to be able to spot the difference!

Previous studies have shown that babies can tell that one sequence of coloured shapes has a pattern to it. But we need to know if babies do this because they are aware of the pattern or whether it is because one sequence is more interesting. In this study we will ask your baby to watch sequences of both kinds and see which one they prefer. We expect babies will look longer at the random sequence because it has more variety (less repetition) in it.

We thank you and your child for participating in this study. Your contribution to this research helps us understand how infants can spot patterns in the world around them!
Spotting the difference:

In the first sequence overleaf, the shapes always come in pairs and so may get boring after a while..

The second sequence is completely random and so is always changing..

For different versions of this study, we will be using triplets of items like so...