**Two-year-old children understand complex grammar**

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Psychologists at the University of Liverpool have found that children as young as two years old have an understanding of complex grammar even before they have learned to speak in full sentences.

Researchers at the University’s [Child Language Study Centre](http://www.liv.ac.uk/psychology/clrc/clrg.html) showed children, aged two, sentences containing made-up verbs, such as ‘the rabbit is glorping the duck’, and asked them to match the sentence with a cartoon picture.

They found that even the youngest two-year-old could identify the correct image with the correct sentence, more often than would be expected by chance.

The study suggests that infants know more about language structure than they can actually articulate, and at a much earlier age than previously thought.

The work also shows that children may use the structure of sentences to understand new words, which may help explain the speed at which infants acquire speech.

Dr Caroline Rowland, from the [Institute of Psychology, Health and Society](http://www.liv.ac.uk/pcbs/), said: “When acquiring a language, children must learn not only the meaning of words but also how to combine words to convey meaning.

Most two year olds rarely combine more than two words together.

They may say ‘more juice’ or ‘no hat’, but don’t know how to form full sentences yet.

“Studies have suggested that children between the ages of two and three start to build their understanding of grammar gradually from watching and listening to people.

More recent research, however, has suggested that even at 21 months infants are sensitive to the different meanings produced by particular grammatical construction, even if they can’t articulate words properly.

“We tested this theory by showing two-year-old children pictures of a cartoon rabbit and duck.

One picture was the rabbit acting on the duck, lifting the duck’s leg for example, and the other was an image of the animals acting independently, such as swinging a leg.

We then played sentences with made-up verbs – the rabbit is glorping the duck – over a loudspeaker and asked them to point to the correct picture.

They picked out the correct image more often than we would expect them to by chance.

“Our work suggests that the words that children say aren’t necessarily the extent of what they actually know about language and grammar.

The beginnings of grammar acquisition start much earlier than previously thought, but more importantly it demonstrates that children can use grammar to help them work out the meaning of new words, particularly those that don’t correspond to concrete objects such as ‘know’ and ‘love’.

Children can use the grammar of sentence to narrow down possible meanings, making it much easier for them to learn.”

The research is published in the journal [*Cognitive Science*](http://cognitivesciencesociety.org/index.html).