



OSCCI NEWSLETTER



Oxford Study of Children's Communication Impairments, Department of Experimental Psychology,
University of Oxford, OX1 3UD

<http://www.psy.ox.ac.uk/research/oxford-study-of-children-s-communication-impairments>

Children with an extra X or Y chromosome

Little is known about the impact of an extra X or Y chromosome, although it often affects language development to some extent. We are trying to build a better picture of the way these conditions can affect development.

It has taken several years, and we have seen several teams of research assistants come and go: Louise, Elaine, Nikki, Annie, Georgina, Eleanor, Holly and Sarah have travelled all over the UK to see families; we completed data collection in October and we now look forward to analysing the results.

We will have more to report next year: so far, we are still preparing results for analysis. It is clear already, though, that there is a great deal of variability from child to child. In some children, having an extra X or Y chromosome is associated with an increased risk of problems with language or social development, which are severe enough to affect day-to-day life and schooling. But in others, the extra chromosome causes few problems.

Geneticist Dr Nuala Simpson joined OSCCI this year, and, together with our collaborators in Nijmegen and Oxford Brookes University we will look in more detail at the X and Y chromosomes, as well as the other chromosomes in these children, to see what genes could be involved and what those genes could be interacting with. We are particularly interested in genes involved in the connections in the brain.



The red dots show where we have travelled to see children for our study

If your family took part in this study, please do let us know if you have moved, so we can keep in touch with results.

You can update your contact details on our website

(<https://www.psy.ox.ac.uk/forms/OSCCI-SCT-Study-Change-of-Address-form>), or by emailing us at oscci@psy.ox.ac.uk

**A big THANK YOU to all those families, school staff and other professionals who have helped with all the studies featured in our newsletter.
Our research would not be possible without you!**

We also acknowledge the funders who have made our research possible, especially the Wellcome Trust and the European Research Council who support our work with major grants.

Understanding complex sentences

Dr Pauline Frizelle is a speech and language therapist with a particular interest in children's understanding of complex sentences. These are sentences where one sentence is embedded into another. For example, two sentences such as *She caught the boy* and *The boy fell* can be expressed as one sentence *She caught the boy that fell*. The ability to combine two sentences in this way is a very important stage in child language development. There is currently no assessment available with a particular focus on these types of sentences, many of which cannot be accurately assessed by a still picture. Pauline has developed an animated task, which focuses specifically on children's understanding of complex sentences. She is currently administering this task with children who do not have any difficulties to see what is typical in young children's understanding of these particular sentence types. She will then go on to carry out this assessment with children who have specific difficulty learning



language such as those with Down syndrome and Autism.

How do children learn grammar?



Dr Kuppuraj has a background in Speech-Language Therapy. He studied children with language learning difficulties for his PhD and was teaching in India before he took up a Newton fellowship and joined us in April 2016.

Kuppu is interested in the kind of implicit learning that allows us to predict what will happen next in a sequence of events. We use this in everyday life, but is it important for language learning? He has devised some game-like tasks to assess this type of learning so he can see if it is affected in children with language disorders. He is also interested in the possibility that languages with different grammatical structure may vary in how far they use this prediction learning. For instance, Kuppu is fluent in two Indian languages that use word order much less than English. In his languages 'eat food' and 'food eat' are equally acceptable forms to use where as in English word order is more important. He will be comparing children in India with those in England on the same tasks to test this out.

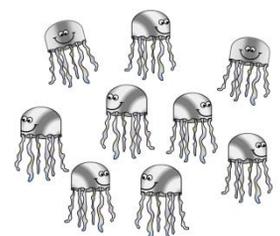
If you are interested in taking part in Kuppu's studies, or want to find out more, please email: kuppuraj.sengottuvel@psy.ox.ac.uk

Research on sensory aspects of autism

Dr Cathy Manning is the Scott Family Junior Research Fellow in Autism and Related Disorders at University College, Oxford. Cathy's research has focused on one aspect of autism that has been neglected: sensory symptoms such as oversensitivity or insensitivity to aspects of vision, sound or touch. In 2013, new diagnostic criteria were formulated for autism, which recognised for the first time that sensory symptoms are a core feature of the condition.

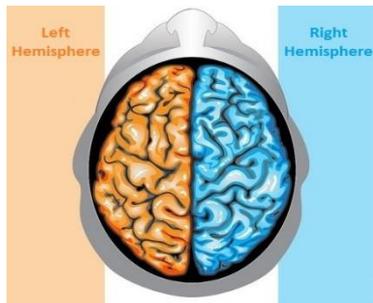
Cathy is looking at the underlying causes of sensory symptoms. She has just finished a project using fun computer games in which children make judgements about groups of fish and jellyfish. She found that autistic children showed good – and sometimes better-than-average - ability to combine different types of information to work out the overall direction of the group. She is now devising a new study with MSc student Furtuna Tewolde to look at how children with autism make predictions and apply what they have seen or heard before to new situations.

Thanks to everyone who took part in this project! If you are interested in taking part in further studies, or want to find out more, please email: catherine.manning@psy.ox.ac.uk.



Language laterality in the brain

Our research group has a long track record of studying the mystery of how the two sides of the brain process language. We have used Doppler ultrasound to measure blood flow to the left and right brain while people perform language tasks. We know that the left side is more active in most people, but there are people who have a different pattern of activation, and we want to find out more about them.



As part of a new project, Dr Zoe Woodhead and grad student Abbie Bradshaw will test the idea that people with language processing spread across both halves of the brain may be more at risk of developing language disorders.

Next year, we will start recruiting adult students in higher education for our studies. We are particularly interested in including students who have specific developmental difficulties affecting language, communication or literacy, such as dyslexia, dyspraxia, language disorder or autism spectrum disorder. Please see our website or contact Abigail.bradshaw@psy.ox.ac.uk if you would like more information

This project, CANDICE, is funded by the European Research Council

CATALISE:

Reaching agreement on labels

Last year we reported on the launch of the CATALISE project, which used an online process known as the Delphi method to work towards consensus about criteria and terminology for children's language difficulties.

We worked with a panel of 59 international experts from all English-speaking countries, covering a range of professions, to devise a set of criteria for identifying children with significant language difficulties, and to agree on terminology. Our OSCCI statistician, Paul Thompson played a key role in analysing and summarising all the data, while keeping information anonymous, to encourage everyone to speak frankly.

We have now published one paper on criteria, and have another paper on terminology in process. Links to both papers can be found on the OSCCI website.

Developmental Language Disorder (DLD) was recommended as the preferred term to refer to children who had language difficulties that interfered with everyday life or academic progress, and which were unlikely to resolve on their own. This will replace Specific Language Impairment (SLI), which many panel members felt was misleading.

In 2017, we will be making more films in association with our campaign for Raising Awareness of Language Learning Impairments (RALLI) to explain the new criteria and terminology and raise awareness. We will be working with the Royal College of Speech and Language Therapists, who will help us promote the use of Developmental Language Disorder. And we're pleased to announce that a new Twitter hashtag, #DevLangDis, is already in use.

D EVELOPMENTAL
L ANGUAGE
D ISORDER
#DevLangDis

The RALLI campaign was started in 2012 and supported by funding from the Waterloo Foundation, Afasic Cymru, and the Economic and Social Research Council.

This year we added videos on What's Tricky About Reading as well as new videos for children starring Ed and Dyls, our popular child duo.

For a catalogue of videos see: <http://ralliindex.blogspot.co.uk/>



Hellos and Goodbyes!

This year we welcomed Dr Pauline Frizelle from University College Cork, on an ASSISTID Marie-Curie postdoctoral fellowship focused on children's development of complex syntax, and Dr Kuppuraj (Sengottuvel) from India, who is investigating learning processes in children with developmental language disorder. Our new research programme, CANDICE, funded by the European Research Council, started in October, and provides funding for Dr Zoe Woodhead and Dr Nuala Simpson, as well as graduate student Abbie Bradshaw.

This year we bade farewell to research assistants Holly Thornton, who has moved on to teacher training, and Sarah Morris, who is working for the charity Headway. In addition, two graduate students, Hannah Hobson and Lisa Bruckert, completed their doctorates. Hannah is now a postdoctoral researcher at Kings College London, and Lisa is continuing her interests in brain imaging at Stanford University in the US. Postdoc Andrea Dohmen has taken up a Professorship in her native Germany at the Hochschule für Gesundheit in Bochum, which is pioneering degree programs in applied health sciences, including speech-language therapy. And finally, postdoc Saloni Krishnan has taken on a position with Professor Kate Watkins, so although she is no longer affiliated with OSCCI, we will still see plenty of her as she is just up the corridor!



L to R: Dorothy Bishop, Zoe Woodhead, Cathy Manning, Paul Thompson, Abbie Bradshaw, Pauline Frizelle, Nuala Simpson, Kuppuraj Sengottuvel

For further information: please consult our website for details of research and publications : <http://www.psy.ox.ac.uk/research/oxford-study-of-children-s-communication-impairments>