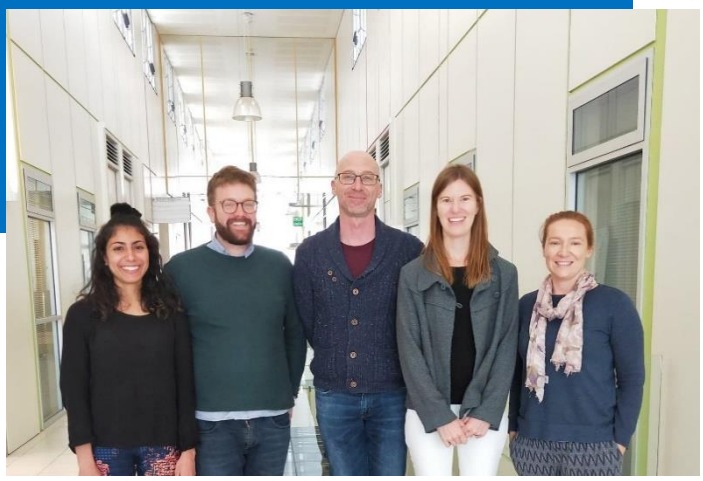
2019

An update from the Language Lab



Dear Families,

It has been a year of changes and growth here at the language Lab!
We have bid farewell to some 5 year old participants. We have also said goodbye to some of the team, although like a good boomerang, Katherine has returned. Alas, we must go on, as there is research to be conducted! A big THANK YOU to everyone who has been involved in our research endeavours this year. Here's what's been happening…

The Canberra Longitudinal Child Language Project

The Canberra Longitudinal Child Language (CLCL) Project is tracking the typically developing language of a cohort of approx 120 Canberran children, from 9 months old through to 5 years of age - when they will be ready for school. (For details, see the CLCL tab on our website: https://anulanguagelab.wordpress.com/clcl-project/

As of October this year the entire cohort had completed the first ten testing sessions; up until 4 years of age (48 months).

In 2019, for the 54 month age group, the children continued to complete tasks using the eye-tracker in addition to playing 'language games' with our experimenters.

We have also begun testing the 5 year (60 month) age group! This means that some of the older children in the cohort have had their final session and graduated! We are ever so grateful for the time that all of our families have put into this project. Congratulations on an amazing effort!

Here are some of the things we have discovered from the analyses that we have conducted thus far:

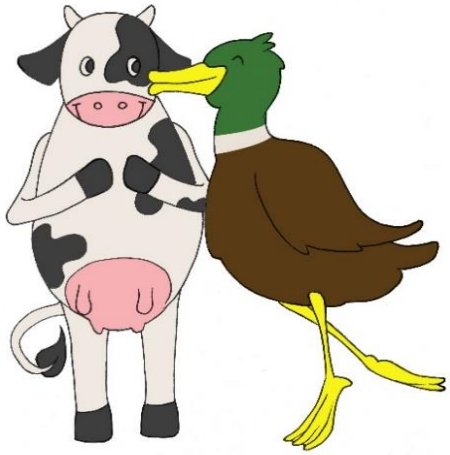
One goal of CLCL is to understand the relationship between children's environment and their language development. We have recently been studying this using the LENA, the recording device families took home after every session between 9 and 24 months, and their vocabulary as measured by

the vocabulary checklist, given out at this time. One particularly interesting variable that the LENA measures is the number of conversational turns between the child and caretaker. The number of conversational turns increases between 9 and 24 months, as does vocabulary size. To test whether the two were related we estimated a number of statistical models predicting vocabulary growth from increases in conversational turns and conversational turn growth from increases in vocabulary. We found evidence that the two variables influence each other: increases in vocabulary lead to increases in conversational turns, which lead to further increases in vocabulary. The important message here is, overall, engaging in conversation is very important for language development. However, the results also suggest something more profound – infants themselves are active participants in their own language development – their bids for conversation help improve their own vocabulary.

We have also been looking at the CLCL cohort's grammatical development and have discovered that the children are very sophisticated even at the age of 3 years!

One of the children's favourite tasks at the Lab is the SNAP card game where they take turns with Amanda to describe the pictures (especially because they always win!). What the kids don't realise is that we are secretly looking for their knowledge of a complex grammatical structure – the passive.

When we describe an action like the one in the picture, we can say "*The duck is kissing the cow*" or "*The cow is being kissed by the duck*". The second sentence is a passive structure, which is much harder for kids (and even adults) to understand and produce. Earlier research has shown that after they



hear a passive, children often use a passive to describe their own picture, showing that they know about the structure. We found that when Amanda used a passive to describe her picture, children were more likely to use one too. But how do we know whether children can understand and produce the passive only for a particular verb (e.g. kiss) or that they understand the passive more generally? We carefully constructed our task so that sometimes the verb that children were likely to use was the same as the one Amanda used (e.g. both pictures were of kissing) and sometimes the verbs were different (e.g. one hug picture and one kiss picture). If children use a passive, even when the passive they heard was with a different verb, then they have a general rule across verbs for the complex passive structure. And this is exactly what we found – even if the verbs were different, our kids were able to use the passive. Looking at how this effect develops as the children get older will form the basis of Shanthi Kumarage's PhD research.

Publications

We have been busy working away at a range of papers over the last year. If you want a copy of the full length version of any of our publications, email Amanda for a copy (amanda.piper@anu.edu.au), or download

them directly from Evan's publications page (https://www.mpi.nl/people/kidd-evan/publications).

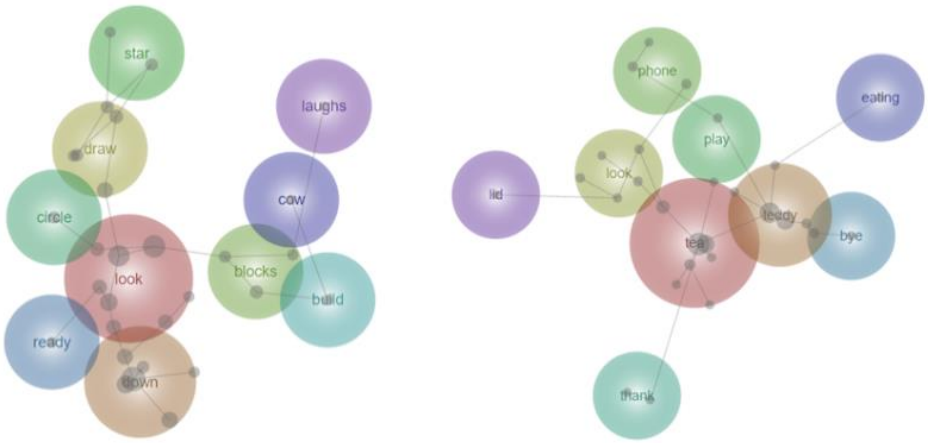
We have several other papers in preparation or in submission, so watch this space for more to come!

Noelie Creaghe has just submitted her PhD thesis, exploring the contexts in which children learn language. She worked on the same dataset that Sara Quinn collected for her PhD thesis, which investigated language and communicative interaction in pretend and goal-oriented play in children from 18-24 months of age. In her thesis Noelie focused on what happens when the children are 24 months.

Her analyses showed that symbolic play is a challenging but communicatively rich environment for infants' language development. During pretend play (e.g., pretending a block is a car, or a piece of chocolate), parents and infants were more engaged and children were more likely to take the lead in the conversation. Language was more complex in pretend play. Overall, the findings continue to support previous ANU language lab results that suggest pretend play is a beneficial context for language development.

One particularly novel component of Noelie's thesis was the use of computer algorithms to study parent-child conversations. Using this program, she found that conversation topics are more interconnected in pretend play, which may explain why pretend play benefits language development. This interconnectedness is shown in Figure 1 above, with the content of goal-oriented on the left and pretend play on the right.

This year, Noelie made several visits to the Max Planck Institute for Psycholinguistics in the Netherlands, which culminated in her presentation of her entire PhD work in June. She will continue to present her work next year at several international conferences while working on publishing her findings.



Meet the Language Lab Team

Dr Evan Kidd

Evan is an Associate Professor in the Research School of Psychology at The Australian National University, and is the Language Lab's founder. He has been studying child language acquisition for 22 years in a number of different countries and cultural contexts, from "big city" contexts like Canberra to the wilds of Papua New Guinea.

Amanda Piper

Amanda is the Research Officer currently managing the Canberra Longitudinal Child Language Project. She completed her Bachelor degree in Applied Psychology at The University of Canberra. She went on to clinical studies, before having her two children, now aged 8 and 11 years-old. She was previously teaching at the ANU Research School of Pschology before moving to the language lab at the start of 2018.

Seamus Donnelly

Seamus is instrumental in the analysis and interpretation of our various growing data sets, especially the CLCL Project. He has been with the lab since the beginning of 2016, and has presented the findings of our research at several international conferences. Seamus' PhD research, completed at the Graduate Centre at the City University of New York, investigated the effects of bilingualism on cognition.

Katherine Revius

Katherine is a Research Officer who joined the Lab in mid-2016. She co-ordinated and tested for the IDLD longitudinal project and is a valuable contributor in the lab overall. Previously, she has worked in the Child Language Lab at Macquarie University. Katherine has a degree in Linguistics from The University of NSW, and is a mum of three.

Shanthi Kumarage

Shanthi began working with the Lab as a Research Assistant last year, after having previously assisted on several studies and completing a student project with us. She has recently completed testing for the IDLD project alongside Katherine, as well as working with data for the CLCL Project. Shanthi has begun work on her PhD, on complex grammatical structures.

Noelie Creaghe

Noelie has completed her PhD research at the Lab which investigated the effect of different types of play on language acquisition. She completed her degree in Psychology at Harvard University and is mum to a 4 year-old!

Thank-you from the Language Lab team for your interest and involvement in our research.

More information about the Language Lab's research projects and activities is on our website:
https://anulanguagelab.wordpress.com/
Also on Facebook:
www.facebook.com/LangLabANU