

July 2023

# BABYLAB

## Thank you Baby Scientists!

**It has been an amazing year for science with 400+ studies run since September 2022. We could not have done it without all the Babylab parents who brought their little scientists in to help.**



**Please enjoy reading through the many studies that have now either been published, completed or are still on going!**





# Study Updates 2022/2023

## Children's word learning and parental phone distraction (17-19 months)

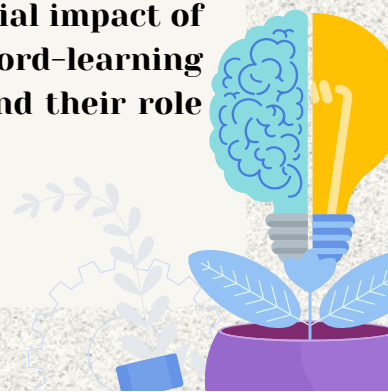
**Delphine Nguyen and Prof Caroline Floccia**

**Our study investigated whether parents being on the phone can influence word learning in young children (17-19 months). To do this, parents were asked to teach 2 new words to their children. During the teaching phase of one of the two words, parents would receive a text on their phone to complete a questionnaire (~30 seconds).**

**Before the task, half of the parents were told the true purpose of the study, namely that we were examining whether parental phone texting can impact word learning in children. The other half was told a cover story, namely that we were interested in examining how infants learn from their parents and how parents felt while they teach something new to their infant.**

**To test if children learned the new words, we used the eye-tracking procedure. Children saw two pictures (a target and a distracter, presented side-by-side simultaneously) as they heard an instruction to find a particular object (e.g., "Look at the poma").**

**It was expected that children would learn the non-interrupted word better than the word interrupted by a phone text. Also, we hypothesised that children whose parents knew the true purpose of the study (Scenario 1) would outperform those whose parents were given the cover story (Scenario 2). Our findings partially confirm our hypotheses: although children learned the interrupted and uninterrupted words equally well, the children with Scenario 1 outperformed children with Scenario 2 on word learning. Our results point to the potential impact of parental responses and attitudes towards their phones in word-learning situations. The effect of parental attitudes on phone use and their role could be further explored.**





# Study Updates 2022/2023

## Children's empathy and screen time (33-45 months)

**Delphine Nguyen and Prof Caroline Floccia**

**Our study investigated whether children's and parental screen time can be related to 3 years old children's empathy development. To do this, children were shown emotional cartoon videos (e.g., a happy child receiving a gift, and a sad person saying goodbye to his horse as the horse is released into the wild), and eye tracking was used to assess social attention to emotional faces. Also, for each video, children were asked questions on how the main character was feeling (e.g., "Is the little girl happy or sad?") and why the character in each clip was feeling happy/sad. Then, questionnaires about the child's and parents' screen time was given to the parent to measure their regular electronic device screen use.**

**It was expected that screen time would be negatively associated with children's cognitive empathy and social attention. Our findings showed that one measure of screen time correlated negatively with one measure of empathy: children's alone screen use (e.g., the time children spend on their own watching TV, streaming online, and gaming) and emotion explanation accuracy. The more children spent time on screens alone, the less accurate they were when explaining the emotions in the video clips.**





# Study Updates 2022/2023

## Bilingual Language Environments (6-24 months)

**Anna Caunt and Dr Rana Abu-Zhaya**

**Our project explores the everyday language environments of 26 infants growing up in multilingual homes around London. Each family received a small audio recorder with an infant t-shirt to fit the device and were asked to record the language input their child was exposed to at home for two full days, alongside narrating the day with an activity log. Since our last update, we can report that we have almost finished our data analysis with just two more families left to process. Alongside the audio recordings, families also completed a language attitudes questionnaire where they were asked to rate their attitudes towards their languages across two main themes: emotional experiences of language use that are related to self and child (theme 1), importance of using a language to personal life and that of the child (theme 2). The results showed that in theme 2, caregivers were more likely to rate the society language (English) higher than their heritage language, whereas in theme 1, there was no evidence for differences between language ratings. Overall, mothers and fathers had similar attitude responses across the themes, yet mothers rated their society language above their heritage language in theme 2. This study has been submitted to a journal and is currently under review. Families will be notified when it will be available to read.**

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# Study Updates 2022/2023

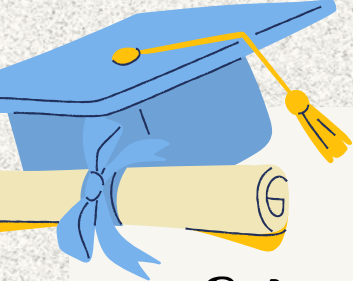
## Bilingual Language Environments (6-24 months)

Anna Caunt and Dr Rana Abu-Zhaya

Since the last newsletter (2022), we have begun to look at how language is structured around daily activities, using the audio recordings and the daily activity log. Previous studies have shown that the types of activities families engage with influence the language input that infants receive e.g., at meal-time infants are more likely to hear 'cup'. However, little is known about language input in multilingual environments, and it is unclear whether activities are structured around specific languages, or if infants are exposed to language-specific context-dependent words. Results with data from 14 families showed that meals and play interactions with two caregivers included high proportions of two languages. However, even when one speaker was present, the speech input was more likely to include two languages than one, suggesting that one speaker switches between languages. We observed more language-switching in meal times compared to play, highlighting that certain activities provide multilingual infants with an opportunity to learn vocabulary in a variety of languages. Once all our analyses have been completed with all families, we hope to look at how language is structured in more activities such as reading and bath time.

Lastly, we have also begun a follow-up study with a sub-sample of these same families (with infants in the age range of 27-33 months). Mothers and their infants took part in a 20-minute play session over Zoom and infants took part in a language assessment. Thus far we have reunited with seven families and look forward to conducting the study with more over the next few weeks. The goal of this study is to investigate the relationship between infants' vocabulary comprehension and the language input they were exposed to earlier in their development.





# Study Updates 2022/2023

## Talking Heads (5 & 12 months)

**Paul Ratnage and Prof. Caroline Floccia**

Research shows that 5-month-old infants pay more attention to a speaker's mouth than their eyes when listening to them talk but will only do so at 12 months if the speaker is talking in a foreign language. It has also been found that infants prefer to look at someone who has spoken to them in their native language rather than a foreign language. This study examines whether infants will use the same strategies when listening to a local accented or a regional accented speaker. Infants are presented with videos of females speaking in either a local (Plymouth) or regional (e.g. Scottish) accent. Using our eye-tracker, we examine how long each infant looks at each speaker to gain an idea of their preference. We also measure how long they look at each speaker's eyes and mouth to see if this will differ based on the accent they are hearing. We are still collecting data for 5 month age group, but we hope to be able to present the full analyse of the results very soon.

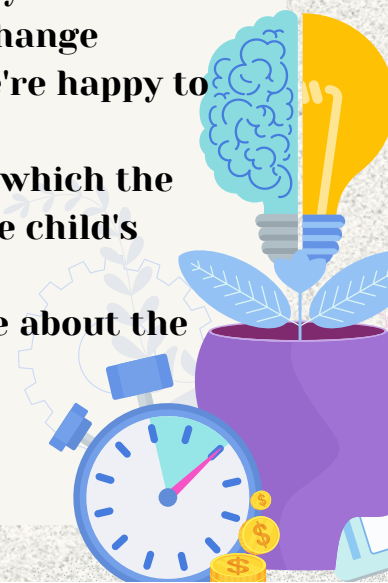
## Mummy control/ Mummy Av (5 Months)

**Paul Ratnage and Prof. Caroline Floccia**

Continuing from last year, Mummy AV would look at the consonant bias in children. It shows correct pronunciation of 'mummy' and mispronunciation with either a consonant or vowel change ('nummy'/'memmy'). This took place in the head turn, and we're happy to say that all data has been collected.

Mummy Control was the control version of Mummy AV in which the word 'mummy' is compared against a nonword to see the child's preference.

Research for this is still ongoing and we hope to hear more about the results soon.





# Study Updates 2022/2023

## SPRLAB

(18, 24, 30–36 months and adult)

**Nadine Fitzpatrick and Prof. Caroline Floccia**

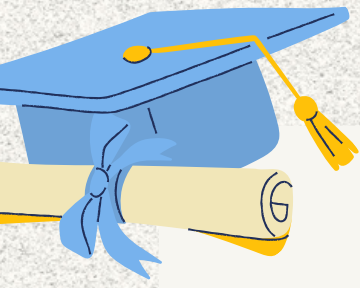
**From September, we begun a replication of a study that took place online during Covid, that some parents may remember.**

**This study was based on Semantic priming, showing either related pictures (cat–dog) or unrelated (cat–shoe).**

**An effect was found with the related condition when the associations were found in the child only vocabulary, but there was no effect when children and adults shared the association. This is where the in-person replication on the study started - in order to see whether testing online, masked any effects. Two other ages were also added (18 months and 24 months), to see whether the same priming effects appeared in different ages.**

**Thank you to everyone who has come in to help with SPRLAB, the testing process is still on going and hopefully we will have results for you soon.**





# Study Updates 2022/2023

## Children's Word and Category Learning Study

Dr. Chi-Hsin (Esther) Chen

**This past year, three undergraduate students working with Dr. Chi-hsin (Esther) Chen completed their dissertation project with participants recruited from the BabyLab. They studied whether 4- to 6-year-old children were able to learn novel words and form object categories at the same time. Thirty-two children participated in their study.**

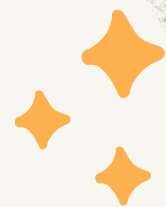
**In addition, we are currently testing whether children's memories and attention affect their word and category learning. During the study, children watch short videos and play a card sorting game and a picture matching game. We plan to recruit 80 4- to 6-year-old children for this study.**







The PhD students have been travelling all around the world with their research this year!



**Bilingualism matters 2022**

**Edinburgh**



**Anna Caunt**

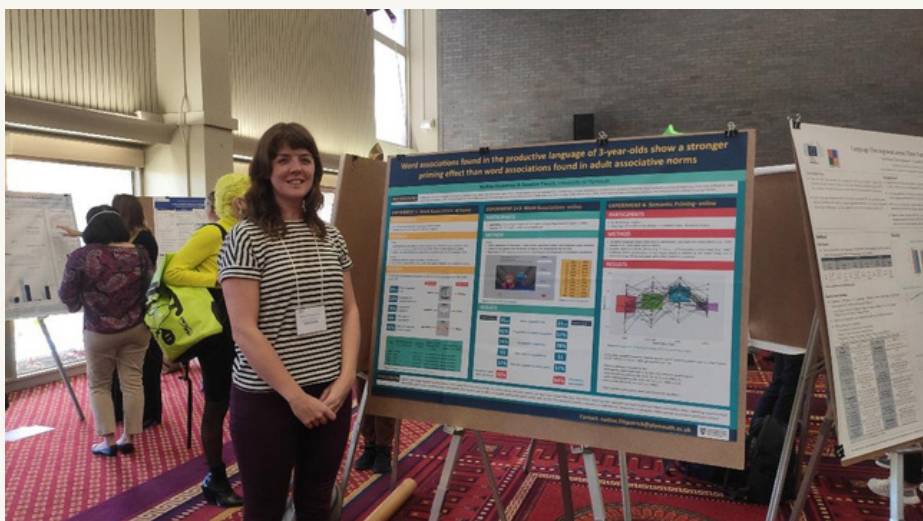


**Boston University Child Language Development Conference**

**Boston, USA**



**Nadine Fitzpatrick**





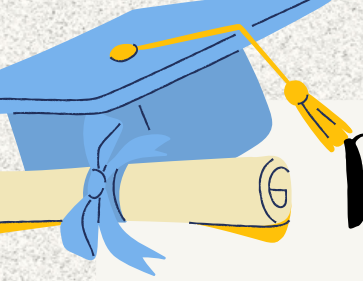
# Congrats!



**We also want to take this opportunity to say Congratulations ! to Nadine Fitzpatrick on finishing her PhD and completing her VIVA. We look forward to her new studies and published papers.**



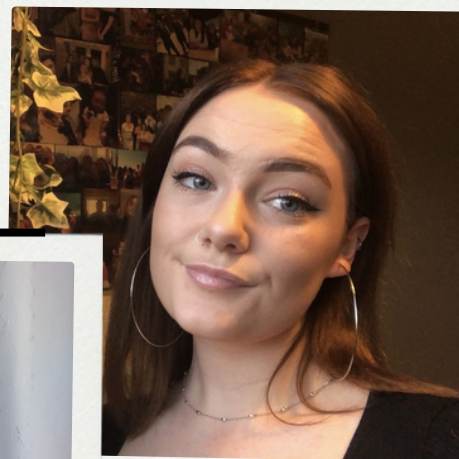
**Also Good Luck! to Paul Ratnage and Delphine Nguyen who will be finishing this year!**



# Placement students of 2022/2023

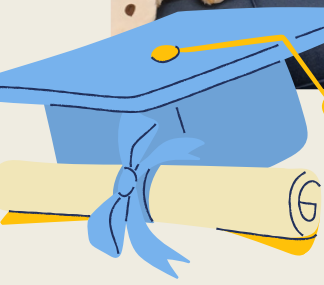


**Thank you to our amazing placement students who have worked with us this year. You will have been used to seeing Yas, Rachel and Roxana during your visits here in the lab and over email. We are so proud of how they have grown in both their skills and confidence over the placement. We wish them good luck in their final year at the University!**



**We'd also like to welcome our new PhD student Darya! We wish her luck in all her new exciting research.**





# Graduates of the Year





# We're so proud of our Baby Graduates of 2022-2023!

If you would like to remove your data from our database, or have any other children you would like to add then get in touch at: [plymouthbabylab@plymouth.ac.uk](mailto:plymouthbabylab@plymouth.ac.uk)