This is our Fourth annual newsletter since the launch of our website and press campaign in the winter of 2006. Its fantastic to see the BabyLab growing and developing with every year, with so many of you visiting us and lots of little ones leaving with baby and young scientist certificates. We are pleased to be able to present to you some of what we have achieved within the year.

To find out the results of each study, visit plymouthbabylab.org, follow the link “News” and then “Summary of all studies”

The BabyLab Team

Within the BabyLab team there are a number of different researchers. It is made up from lecturers at the university, Dr Caroline Floccia, Dr Michaela Gummerum and Dr Allegra Cattani, and also Post Doctorate students, PhD students, Placement students and Undergraduate students.

Undergraduate students are carrying out research within the BabyLab for their dissertations. Psychology students at Plymouth University are required to carry out a research project in their final year and write up as a scientific research paper/report. This year we had 5 undergraduate students carry out their dissertation with us; you may have met one of them if you came in to take part in either the Monolingual/Bilingual study or the Eyetracking study. We will have a new (and larger) group of undergraduate students in September.

The University also encourages placement years, and Psychology offers a 4 year sandwich course, in which students complete their first two years, work for a year and then return for their final year. This year, we took on our first placement students to work within the BabyLab; Hayley Wallington, Samantha Momer and Emily Cooper. They have been involved in the general running of the BabyLab, as well as carrying out their own research or assisting other members of the team with theirs. They will all be returning to carry out their dissertations in the BabyLab in September.

We have 3 PhD students also working within the BabyLab; Hester Duffy, Samantha Durrant and Rafalla Farag. Hester has completed a number of years working in Oxford’s BabyLab and has moved to Plymouth to start her PhD focusing on accent normalisation and adaptation. Samantha completed her undergraduate degree at Plymouth University having conducted her dissertation with us, and continued on with her PhD on bidialectalism. Rafalla has joined us from Lybia and is carrying out research on bilingual Arabic-English children.

We would also like to congratulate Joe Butler on his recent completion of his PhD in Dec 2009. Joe carried out his PhD within the BabyLab and has since been working as a Post-Doc for us. His work has been mainly on accent perception in infants and adults.

Of these 399 visits, this includes...

- 38 visits by 6- and 8-month-old babies investigating word discrimination
- 16 visits by 11-month-old babies helping us with our study of recording brain activity
- 30 visits by 7- to 9-year-olds helping us evaluating group learning
- 20 visits by 6- to 8-year-olds to look at remembering autobiographical memories
Oxford CDI: what does it tell us (and you)?

Most of you who came to the BabyLab were asked to fill in the Oxford CDI questionnaire (Communicative Development Inventory), which is a list of 416 words that are presumably part of children’s early vocabulary.

What we do afterwards is count the number of words that you reported your child could produce when she/he came to the BabyLab, and compare it to the curves which have been computed by the BabyLab team in Oxford University. The reason for this is that we always need to show to our colleagues, when we publish our data, that our little participants were developing language “normally”.

This term “normally” entails actually much more variation than you may imagine. For example, at 16 months, 50% of children produce a maximum of 3% of the entire CDI word list (which means they can say on average 12 words), 10% of them produce NO words at all, and another 10% produce 18% of the list (about 75 words).

At 20 months, 50% produce 40 words, but 10% produce 5 words, and 10% produce up to 166! So, as you see, the variation is huge!

Besides, your child’s vocabulary score at these ages does not predict their later ability to speak or to perform academically. Some children walk earlier than others, some talk earlier, each goes at his/her own rhythm. Girls usually produce more words than boys too. You can check the developmental curves of the CDI for yourself at:
http://psyweb.psy.ox.ac.uk/babylab/cdi.html

We email it to you before your visit and ask you to complete, and return, it to us before the day of your visit. Please make sure that you fill in the questionnaire at a time close to your visit, because toddlers learn words extremely fast at that age, and therefore from one week to the next the CDI score might change!

Why haven’t you been contacted yet?

As you can see on the summary of researches on our website (www.plymouthbabylab.org, follow the link “News” and then “Summary of all studies”), each study targets a very specific age range. For most of them, we need to see children when they are, for example 5 months old, plus or minus 3 weeks. So, when we start a study, we look on our database for children who will be within this range at the moment of testing, and therefore you may simply have been unlucky because your child was just a little too young or too old to participate.

Another reason might be multilingualism. For most of the studies, the tradition in the field is to see monolingual children, because this is the “simplest case”. It is already extremely complicated to study how language develops in a monolingual child, and it adds to the complexity by including little bilinguals or trilinguals. However, as you can see in the summary of our studies, we do also include bilingual children, because sometimes of course this is precisely what we look at: how do bilingual children develop languages compared to monolinguals. Having said that, when the study we carry out is not about language, as in the case of studies supervised by Dr Gummerum or Dr Cattani, then it doesn’t matter whether the children are or are not bilingual, and then you may be contacted too!

Another very common reason is that your contact details have changed in between, or we have made a mistake when writing down your email address, for example. When this happens, we try every way we can to find you (email and telephone). If you think you might have been in that situation, please let us know (use the FREEPOST coupon on page 4, give us a ring, or email us).

However, if for any reason you don’t want to be contacted in the future, please let us know.
New research in the BabyLab: Recordings of brain activity in 11-month-olds

This year for the first time in the BabyLab, we have carried out a study which looks directly at brain activity instead of using “natural” behaviours such as looking or pointing. In this study, we were interested in infants’ ability to recognise individual words which they have previously heard as part of a continuous speech stream, and we were looking at whether they are able to do this when the words are spoken in a different accent. We were also hoping to see whether the children’s responses to regional English accents are different from their responses to foreign accents. For this study, our participants wore a close-fitting cap with a number of sensors in it. An electrolyte gel was squirted into each sensor, changing the light on each one from red to green, to tell us we have got a good connection and are reading the child’s brain activity.

The children then heard a number of sentences and words, while their carer kept them happy with toys and a video. Meanwhile, the sensors picked up tiny changes in electrical activity within the brain itself, in response to the speech they were hearing. Once the data will all be collected and analysed we hope to be able to shed some light on children’s understanding of different pronunciations and different types of accents. We have tested 16 children at the moment of writing, and we will need at least 40 more.

When we first started this study, we feared that parents would be reluctant in coming to the BabyLab for that kind of study. If you look at the picture below, you can see that our little participant Maxwell is very happy, although Hester is using a niddle to inject the gel. It looks scary, right? Actually the niddle is blunt and not long enough to go through the cap, so it never touches the child’s head. Second, the gel is identical to the one midwives put on our tummy when we go for a scan during pregnancy. We use baby wipes and the tap water to take it off. Therefore, as you can see, the children undergo a pleasant experience. Once parents have been explained this, the vast majority is happy to join in.

The second obstacle was to convince children to keep the cap on the head for 1 hour. The only way is to play with them, so that they forget all about it. We started with a limited amount of toys, but trips to Toys’R’Us have helped us gathering various new toys: however they had to be quiet, washable and of course fascinating for 11-month-olds.

The third obstacle was to make sure the children would agree to stay in the setting during the entire 30-40 minutes of the sound presentation. We were very pleased to see that the situation pleases them enough for this happens most of the time.

A lot of parents asked whether they could make pictures, as they found it quite funny to see their little one with the cap on! It’s definitely some pictures that will stay in the family album!

Have you moved house? Had another baby? Update your details using the form on page 4
New details to register? Got a friend to join?

Have you moved house, had another baby or changed your telephone number/email address?

If yes, then we would like to update your details. Please complete the form below and return to us at the FREEPOST address above (no stamp needed).

Please delete as appropriate:

- I would like to change or update my details
- I would like to sign up to the BabyLab (if you are new to us and wish to sign up to the BabyLab, we will contact you soon for further registration details).

Title……………………………………………………...
Forename……………………………………………..
Surname………………………………………………..
Address………………………………………………...
Postcode………………………………………………
Tel:……………………………………………………
Email…………………………………………………
Child’s name (if new to database) ………………………
Child’s date of birth……………………………………

Want to contact us?

Email info@plymouthbabylab.org
Telephone 01752 584865
Address FREEPOST, Babylab, Portland Square, Drake Circus, Plymouth, Devon PL4 8AA

If you have any queries, concerns or you wish to withdraw from the BabyLab at any point, we are always happy to speak with you. If you ring us, and are asked to leave a message, please feel assured we will attempt to get back to you as soon as possible.

There is also further information available through our website: www.plymouthbabylab.org

BabyLab collectors

Whenever you come to the BabyLab, we offer you £3 to cover your travel expenses, or a lovely BabyLab t-shirt, to choose from a range of colors or designs. Starting this year, you can also choose a £5 voucher at Waterstones.

Also, when you leave, your child will receive a one star certificate on their first visit, two stars on their second, and so on. Regular visitors can work towards their rocket certificate!

So with a BabyLab T-shirt, a BabyLab balloon and a BabyLab certificate, your child will leave the BabyLab fully customized!

Over the past 40 years, the world’s knowledge in child development has increased dramatically, thanks to hundreds of thousands of parents like you who have volunteered their time for research. All around the world, psychologists, pediatricians, speech and language therapists, health visitors, neuropsychologists, help children in need thanks to people like you.

Thank you!

All studies have received ethical clearance from the Faculty of Science Human Ethics Committee (University of Plymouth). All members of the BabyLab have had CRB checks over the past 3 years. The CRB checks are visible on the wall of the main BabyLab room, Link 208.