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| MSci Research/ Placement Project Specification 2018-19 |
| Organisation  | **UCL Internal Research Project**  |
| Title  |  ***Learning new words and concepts in childhood and adulthood: the role of gestures*** |
| Contact  | Gabriella Vigliocco (g.vigliocco@ucl.ac.uk) |
| Website  | **http://www.language-cognition-lab.org/** |
| Summary | Learning new concepts and their labels has been characterised as a hard problem because the label (the object’s name) is argued to be only arbitrarily linked to the object; and because there usually are multiple objects in the visual scene. The problem is, clearly, even harder when the object is not in view. While a number of cues (e.g., shared attention) have been proposed to help children (2-4) learn new objects and labels, very little work has addressed this question for adults. In our work, we have made the novel hypothesis that the multimodal cues available in communication, such as gestures can support learning because they can imagistically bring to mind’s eye features of referents. One completely open question is to what extent these cues are present both in communication with children and adults. The will use a semi-naturalistic approach and compare interactions between caregiver-child and adult-adult to assess whether/how speakers adjust their language, gestures and prosody depending upon whether the person they are talking to (child or adult) can interact with the objects being labelled or not, and whether the object and the label are novel or not focusing on manual interactions (gestures, and manipulation of objects).  |
| Potentially Required Documents(i.e. Record of Ethical Approval, DBS)  | Ethical approval has already been granted, each student will need a DBS to work on the project |
| Administrative Support  | Karolina Chojnacka  | k.chojnacka@ucl.ac.uk  |
| MSci Research/ Placement Project Specification 2018-19 |
| Organisation  | **UCL Internal Research Project**  |
| Title  | ***Learning new words and concepts in childhood and adulthood: the role of prosody and vocalizations*** |
| Contact  | Gabriella Vigliocco (g.vigliocco@ucl.ac.uk) |
| Website  | **http://www.language-cognition-lab.org/** |
| Summary | Learning new concepts and their labels has been characterised as a hard problem because the label (the object’s name) is argued to be only arbitrarily linked to the object; and because there usually are multiple objects in the visual scene. The problem is, clearly, even harder when the object is not in view. While a number of cues (e.g., shared attention) have been proposed to help children (2-4) learn new objects and labels, very little work has addressed this question for adults. In our work, we have made the novel hypothesis that the multimodal cues available in communication, such as prosody and vocalizations (e.g., sound effects) can support learning because they can imagistically bring to mind’s eye features of referents. One completely open question is to what extent these cues are present both in communication with children and adults. The project will use a semi-naturalistic approach and compare interactions between caregiver-child and adult-adult to assess whether/how speakers adjust their language, and prosody depending upon whether the person they are talking to (child or adult) can interact with the objects being labelled or not, and whether the object and the label are novel or not.  |
| Potentially Required Documents(i.e. Record of Ethical Approval, DBS)  | Ethical approval has already been granted, each student will need a DBS to work on the project |
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| MSci Research/ Placement Project Specification 2018-19 |
| Organisation  | **UCL Internal Research Project**  |
| Title  |  ***Learning new words and concepts: Do children drive the learning process?*** |
| Contact  | Gabriella Vigliocco (g.vigliocco@ucl.ac.uk) |
| Website  | **http://www.language-cognition-lab.org/** |
| Summary | Learning new concepts and their labels has been characterised as a hard problem for children (e.g., 2-3) because the label (the object’s name) is argued to be only arbitrarily linked to the object; and because there usually are multiple objects in the visual scene. The problem is, clearly, even harder when the object is not in view. While a number of cues (e.g., shared attention) have been proposed to help children learn new objects and labels, most of the existing literature assume that children are somewhat passive just receiving what caregivers give them. However, some initial work indicates that children may actively drive their learning by shaping the interaction with their caregivers. We use a semi-naturalistic approach in which we look at caregiver-child interactions while playing with or talking about toys. We videorecord the sessions (and we track the caregiver eyegaze). In the project, we will ask whether caregivers initiate interactions about new toys or whether children do, and also what style better predict vocabulary growth.  |
| Potentially Required Documents(i.e. Record of Ethical Approval, DBS)  | Ethical approval has already been granted, each student will need a DBS to work on the project |
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| MSci Research/ Placement Project Specification 2018-19 |
| Organisation  | **UCL Internal Research Project**  |
| Title  | ***Real-world language and the brain*** |
| Contact  | Gabriella Vigliocco (g.vigliocco@ucl.ac.uk) |
| Website  | **http://www.language-cognition-lab.org/** |
| Summary | Language is learnt and mostly used in face-to-face contexts where prosody is used to mark new topics of conversation, visible mouth movements can be used to disambiguate the speech, and hand gestures can provide useful information about the meaning of what is being said. However, language studies for the most focus on speech or text only. Moreover, while a few studies have looked at non-linguistic cues such prosody or gesture in isolation, we know virtually nothing about how the brain orchestrate the processing of these multiple cues, especially in real-world interactions. Using EEG, we will investigate how neural responses to complex naturalistic language stimuli are modulated by linguistic context, prosody, mouth movements, and hand gestures. In the project, you will learn about how to use computational modelling to derive probabilistic measures of predictability of words in context; prepare audio-visual materials engaging professional actors; use software for segmentation and prosodic analysis, programme and perform the EEG experiment; analyse the rich multimodal data and write up the report. |
| Potentially Required Documents(i.e. Record of Ethical Approval, DBS)  | Ethical approval has already been granted |
| Administrative Support  | Karolina Chojnacka  | k.chojnacka@ucl.ac.uk  |