**An interview with Gary Morgan on the language development of deaf children**

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By Angel Chan, The Hong Kong Polytechnic University



Gary Morgan

Gary Morgan sits on the IASCL executive board and in 2002 co-edited with Bencie Woll the Trends in Language Acquisition Research volume 'Directions in sign language acquisition' (John Benjamins). Gary is Professor of Psychology at City University London and Deputy Director of the ESRC research centre Deafness, Cognition and Language (DCAL) <http://www.dcal.ucl.ac.uk/index.html>. His research interests include sign language acquisition, deafness and cognitive development, British Sign Language (BSL), psycholinguistics of sign and gesture and specific language impairment (SLI). Gary and his team work on BSL development in deaf children of deaf parents, late language acquisition and its effect on language processing and social cognition, and recently identified a group of deaf children with SLI. Gary serves on the editorial board of *Deaf Studies and Deaf Education*.

Language development of deaf children is an exciting research area. I would like to take this opportunity to ask Gary some questions related to this topic, as well as asking him to share his thoughts on how studying the language development (spoken and signed) of deaf children might enrich our understanding of child language in general.

***Angel Chan****: Gary, how did you become interested in studying the language development of deaf children?*

**Gary Morgan**: At the end of the 80's I took an undergraduate course with Elena Lieven at University of Manchester on language development which got me started. Later I read Melissa Bowerman and Dan Slobin's work on cross-linguistic differences in development. At the time I was learning British Sign Language and decided to try to combine the signing with language acquisition research. When I started my PhD I went to Nicaragua and saw how the deaf children there were contributing to the development of this new language which was an amazing personal and academic experience.

***Angel Chan****: Language development (spoken and signed) of deaf children is an exciting research area. What do you think are the interesting questions to address in this area?*

**Gary Morgan**: Because 9/10 deaf children are born into families with no previous knowledge of signing or communicating with a deaf child, it sets up this environment where despite normal love and care the children have impoverished language experience. Hearing parents who sign with their children do so as non-native learners and the child's deafness means natural spoken language acquisition is going to be effortful. We can ask questions about nature and nurture that are impossible in any other group of hearing children: how does access to language impact cognitive development and what are the limits of the brain's plasticity for language? In the small group of children I study who have a sign language as a first language, we see not only universal patterns in development from the phonological and semantic characteristics of children's first signs to their narrative development, but also really interesting differences in the onset and rate of development, due to both the typology of the sign language and the perceptual modality – visual rather than auditory. In much the same way that children grow up bilingually without conscious effort, there is enough plasticity in the brain that children who are exposed to signing can become native signers.

***Angel Chan****: What are the challenges in studying language development of deaf children?*

**Gary Morgan**: Congenital deafness affects about 1 in 1000 children and so it is a small population to study. If you want to study the most natural case of language acquisition – deaf/hearing children of deaf signing parents this makes the numbers even smaller. As there is so much variability between children in their language development, there is a challenge in doing case studies where it is not clear what typical development should look like. There are also very few standardized tests of sign language development. These days deafness is diagnosed within weeks of birth and medical intervention begins early. Researchers have to understand how the child's development is affected by the various medical professionals who work with the child (cochlear implant teams, audiologists, speech and language therapists). There is no uniformity for how deaf children grow up. Every child experiences different levels of language intervention (spoken or signed) depending on where they live and what kind of parents they have. This makes group studies of deaf children difficult to interpret. Studying sign language development is fascinating but a requirement is knowing how to sign yourself or working with researchers who are native signers – not only to understand the videos but to communicate what you are doing back to the deaf families and community. The work we do at DCAL involves deaf and hearing researchers working together and we receive a lot of input from the Deaf community in the dissemination of our results.

***Angel Chan****: Could you share with us some of your recent findings in this area?*

**Gary Morgan**: We have identified a group of deaf children who use sign language but have severe language delays in comparison with their peers on standardized tests of BSL development. Some of these children have deaf parents. One explanation of Specific Language Impairment (SLI) focuses on auditory processing but cannot explain the linguistic impairments we are documenting in sign language. BSL has rich verbal morphology and a system of classifier constructions for describing the location and movement of entities. We are seeing that this aspect of the language is more affected by SLI than sign phonology (Mason et al in press). In another study we collected BSL and English CDI questionnaires from a large group of deaf children (both from deaf and hearing parents). We found that vocabulary development is slower in deaf children of deaf parents than hearing children of hearing parents contrary to the popular idea that signing is easier for children. We also discovered that in deaf children who are exposed to English and BSL at home, there were patterns in which language they preferred for particular semantic domains (Woolfe et al, in press). In a last study of deaf children's conversations with their hearing mothers, we found really different levels of abstract language used by the mothers to their 24-36 months old children. Hearing mothers used significantly less language about mental states, modulations of assertions and emotional terms with their deaf children than deaf mothers did with their hearing/deaf children and hearing mothers with their hearing children. This could be one of the contributions to non-native deaf children's typical delays in Theory of Mind development.

***Angel Chan****: How about your upcoming plans for research in this area?*

**Gary Morgan**: We are planning a series of intervention studies at DCAL focusing on training for speech and language therapists on SLI in sign language and for parents in more effective ways to communicate with deaf children to promote Theory of Mind development. Our research work is continuing with studies looking at how working memory and executive functions are affected by deaf children's atypical access to language. We have begun to plan a series of studies looking at deaf children's literacy skills which is a particular challenge in reducing the educational gap between deaf and hearing children. In language development I am interested in why certain types of signs especially actions and labels for everyday things like eat, drink and see or umbrella, scarf and gloves are used more readily by hearing infants in their co-speech gesture and by deaf children in hearing and deaf families. What can this tell us about verb development in hearing children more generally and how sign languages evolve?

***Angel Chan****: In your opinion, how could studying the language development of deaf children enrich the study of child language in general?*

**Gary Morgan**: I really believe that the old debate about how much nature and how much nurture is necessary for language development can be informed by looking at signing children. We see very predictable and common patterns in the native signer's acquisition of phonology and grammar, as well as the impact of modality on the rate of development. Theories that can include language acquisition by eye are preferable to those that take into account only one type of perceptual carrier of language. Looking at the early experiences of deaf children in hearing families reinforces what we know about how conversation and community stimulate language and social cognition.

***Angel Chan****: Thank you for sharing your thoughts with us, Gary!*

**References**

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