

Wishing all readers a good 2012!

Dear friends,

We hope this *Winter 2011/Spring 2012* issue of the DCAL newsletter will greet you soon after you return to work from a peaceful Christmas and New Year break.

The newsletter reviews just some of the activities that the DCAL team has been engaged in these last six months since the DCAL summer newsletter.

All of us here at DCAL can look back on 2011 as a busy and productive time – the first year since the Centre’s work was recognised by receiving funding from the Economic and Social Research Fund (ESRC) for a further 5 years’ research and public engagement work. This last year saw us set off on “DCAL II”. We look forward to continuing this journey into 2012, and once more to a year of fruitful and inspiring collaboration with many newsletter readers – academic colleagues, practitioners, press, policy makers and community members.

We hope this issue will make interesting reading for you. If you would like to read about any of the research in more detail please go to DCAL’s website: www.dcal.ucl.ac.uk, or if you have comments or questions please email us at: dcal@ucl.ac.uk.

With all good wishes for
 the New Year 2012,

DCAL directors – Professor Bencie Woll, Professor Gabriella Vigliocco,
 Professor Gary Morgan, Dr Mairead MacSweeney



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Postgraduates at DCAL

Postgraduate students are important members of the DCAL community. Here we take a look at DCAL's ongoing commitment to postgraduate study: current students, a personal perspective, future opportunities and a postgraduate-run conference.

Discussions continue through coffee break at the first postgraduate conference on Current Issues in Sign Language Deafness and Cognition – CISLDC 2011.

PHOTO: ZED SEVCIKOVA/DCAL



Building research capacity for the future

The ESRC Deafness Cognition and Language Research Centre (DCAL) includes within its mission, and its core values, a commitment to developing expertise in deafness, language and cognition among postgraduate research students. And this commitment is clear from DCAL's postgraduate research record.

Since its foundation in 2006, DCAL staff have supervised 15 postgraduate students in the area of deafness, cognition and language. As of 2011 six of these have already earned their PhDs and another six currently working towards their doctorate are expecting to complete during 2012. DCAL is very proud of these success stories, and would be glad to welcome more

students. It is important to the centre to help build capacity in the widest field of its research remit, and DCAL is especially keen to welcome junior deaf academics who will be key in developing the future research agenda.

An evolving global community

DCAL research students come to DCAL from all over the world. Past and present postgraduates have hailed from the USA, Mexico, India, Greece, Australia, the Czech Republic, as well as the UK, and from a variety of backgrounds and institutions. Some have come to us after completing an undergraduate or MA or MSc degree in, linguistics, psychology, applied linguistics, deaf studies or a related field. Some have begun as

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research assistants, either at DCAL or working in a DCAL-related field in another institution. Since 2006, DCAL has had four trainee research assistants. These positions were created with the intention of training new young researchers so that they could begin postgraduate study at DCAL at the end of their post. In this issue we spotlight Tanya Denmark, who has recently completed her PhD, and was one of DCAL's trainee research assistants before she started her doctoral studies. We focus on her story in the box below.

An inclusive environment

DCAL is proud to have developed a strong network of deaf and hearing researchers. To date, we have two

deaf students who have completed their PhDs, and two current deaf students. We have also had hearing students with a knowledge of signing (including those from deaf families, and others with qualifications in Deaf Studies and in British Sign Language (BSL)/English interpreting). We also welcome students who are new to deafness and sign language research and we support them to acquire language skills by providing BSL training within DCAL at BSL levels 1, 2, and 3.

Funding and supervision

DCAL students have received funding from various sources, including UK Research Councils such as the Economic & Social Research Council (ESRC), Arts &

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Tanya Denmark a postgraduate journey



Coming from a big deaf family I have been using sign language all my life, but I only incorporated it into research during my psychology degree when I focused on Theory of Mind in deaf children as a dissertation topic.

to do a PhD on the communication abilities of deaf children with autism. I was funded by the ESRC in their 1+3 quota award. This involved undertaking a one year Masters of Research (MRes) course in speech, language and cognition, which comprised attending interdisciplinary lectures, essay submission, a research project and PhD plan; this was beneficial as it gave me an opportunity to start preparing for my PhD in advance and allowed me the time to develop the relevant research skills.

It was this family link again that encouraged me to join DCAL, as my cousin was working as a researcher there. He had recently completed his PhD in the same field and he supported me with my dissertation to the extent that he proof read it from Vietnam in a backstreet internet cafe! After I graduated he informed me about the opportunity to become a graduate intern at DCAL and I jumped at the chance.

Being a PhD student at DCAL gave me rich opportunities to network with other researchers and receive advice and support. There is also a good team of other PhD students who often meet up for junior researchers' meetings or just post-work visits to the pub to offer each other a shoulder to cry on and constructive criticism.

It was here that I learnt more about linguistics, brain imaging and the other strands of research at DCAL and I relished working on different projects with various members of staff and gaining new experiences. The internship was a one year post which was aimed at familiarizing new researchers with different research areas at DCAL and with the intention of encouraging the intern to develop a PhD proposal and find an area of special interest to them.

Having recently completed my PhD I would recommend it to anyone; it is not without its ups and downs, especially those days when you feel like you will never get it finished. But the feeling at the end when it is sitting bound on your shelf is great and the skills you learn along the way are life-long. Now I just need to find the motivation to write up those papers!

I developed a great interest in atypical sign language, so with support from colleagues at DCAL I wrote a proposal

I am now working as a research associate on the Deaf with Dementia project at DCAL. For the future I hope to stay involved in research; I have been at DCAL for 6 years now and have had a great time both studying and working here.

Humanities Research Council (AHRC), or from Deaf organisations, such as Deafness Research UK, whilst others have received funding from governments in their home country. Students have been supervised by DCAL directors Woll, Campbell, MacSweeney, Morgan, and Vigliocco, and senior researchers Cormier, Schembri, and Atkinson. Dr Kearsy Cormier also acts as DCAL's postgraduate student mentor.

Interdisciplinary research

Postgraduates studying at DCAL have worked on and are working on important research in a range of interdisciplinary areas to further the understanding of deafness, cognition and language. Postgraduate research topics (former and current) at DCAL include: psycholinguistics of handling constructions in sign and gesture; phonology and iconicity in L2 acquisition of sign language; iconicity in sign language; role shift in sign language and gesture; bilingualism; lexical variation in British Sign Language (BSL); prosody/intonation in sign language; facial expression in deaf children with autism.

If you are interested in reading more about postgraduate work and the projects students are involved in, please go to DCAL's website and read more under "Team": <http://www.dcal.ucl.ac.uk/team/team.html>.

All in all this provides students with excellent preparation for an academic career. Not only do they get to see academic life up close, but they live it themselves

Part of the team

DCAL students are treated in a very similar way to DCAL staff. This means they share DCAL administrative responsibility and are expected to contribute to centre and departmental meetings, conferences, and publications. They can also expect to have a similar level of independence in their work. All in all this provides students with excellent preparation for an academic career. Not only do they get to see academic life up close, but they live it themselves. Several DCAL researchers are part-time PhD students and part-time research staff, and for them the overlap between student life and research staff life is stronger still.

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Are you interested in postgraduate study at DCAL?

DCAL is an outstanding place for postgraduate studies in deafness, cognition and language. All students are integrated into the DCAL community in a personal and academic capacity, and in a practical capacity.

In addition to supervision from one or more DCAL staff, students benefit from seminars and centre meetings, and have full access to DCAL resources such as the specialist DCAL library, laboratories, studio space and video editing suite.

There is a research student room on the 4th floor in DCAL itself. Some students also have workspace elsewhere in University College London (UCL), depending on where their supervisor is based. But students are also always on the move, attending

meetings and training courses, not only within DCAL but also around UCL. They travel regularly outside of London for conferences and meetings, and often travel to collect data for their research projects.

Applications are invited for students wishing to study for an MPhil/PhD degree at DCAL. This includes students who have an undergraduate degree (UK 2:1 or better, or top 40% in the class) and who have research interests that fit in with DCAL staff expertise and interests. Inquiries and applications from deaf students are particularly welcome. For more information about postgraduate study at DCAL and possible funding sources, see <http://www.dcal.ucl.ac.uk/postgraduate.html>.

Postgraduate conference showcases international sign language research

Postgraduate students from DCAL organised a unique conference on 16 September 2011 to showcase sign language research at an international level – the first postgraduate Current Issues in Sign Language, Deafness and Cognition Conference (CISLDC).

The conference organising committee, made up of 5 postgraduate students from UCL and 1 postgraduate student from City University London, won a grant to fund the event from the Linguistics Association of Great Britain, which is the leading professional association for academic linguists in Great Britain.

The one day conference, held at University College London (UCL), brought together 80 speakers and delegates from as far afield as Turkey, Iceland, China and Brazil. It was a unique event, enabling young academics from a variety of disciplines related to sign language linguistics to come together to disseminate their findings and share insights into sign language research from across the world.

Presentations included the documentation of endangered sign languages such as Inuit Sign Language, and number and negation in Ugandan Sign Language, semantic organisation in the deaf mind, and assessment of deaf children with language impairment and/or autism. The official languages of the conference were English and British Sign Language (BSL).

The two invited plenary speakers were Dr Pamela Perniss from Radboud University Nijmegen/Max Planck Institute for Psycholinguistics and Patrick Matthews from the Centre for Deaf Studies at Trinity College, Dublin. Dr Perniss talked on current issues regarding language embodiment and iconicity, and Patrick Matthews on changes in handshape in Irish Sign Language under the influence of English.

Other presentations included “Conversational Repair in Argentinean Sign Language”, “The Expression of Spatial Relations in Turkish Sign Language”, and “Similar and Unique Prosodic Marking in Israeli (ISL) and American (ASL) Sign Languages.”

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International postgraduate researchers and senior academic speakers get together for a group photo in front of the DCAL building at UCL to celebrate the success of CISLDC - 2011. PHOTO: ZED SEVCIKOVA/DCAL

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Researchers came from numerous universities overseas, while the British institutions represented were Leeds University, Cambridge University, University of Central Lancashire, Bristol University, Heriot-Watt University, University of London (including UCL, Institute of Education, and SOAS), University of Birmingham, and City University London.

DCAL Director, Professor Bencie Woll said of the conference: "This was a seminal and exciting event for all working with sign language, deafness and cognition, showcasing the work of new young researchers joining the field. Research areas included linguistics, psycholinguistics, neuroscience, language documentation, interpreting, typology, literacy, bilingualism, atypical language development and language assessment.

"Although aimed at postgraduate students it attracted

well-known senior research colleagues including Dr Onno Crasborn and Dr Ellen Ormel. Importantly it was also well attended by language professionals who work with deaf people. The rich mix of participants provided an energetic and supportive environment in which junior researchers could get feedback on their work, as well as comments on how to present to an academic audience."

Members of the CISLDC organising committee reflecting on the conference agreed that it had been an exceptional day for all involved. Many people expressed an interest for the conference to become an annual event, and discussions about a 2012 CISLC event are underway.

The full programme and abstracts from all presentations can be found on the CISLDC 2011 website <http://www.ucl.ac.uk/psychlangsci/cislDC2011>

TALKING ABOUT BILINGUALISM

Across the world most children born today will grow up in bilingual or multi-lingual environments. These children will use two or more languages regularly. One language might be for home, and another for school; or parents might have different linguistic backgrounds. In London and other major cities classrooms are increasingly multilingual. The internet and TV also offer the opportunity for children to learn and absorb new languages. In the past it was thought that early exposure to two languages was confusing for children. But newer research tells us this is not so, and that there are clear cognitive and educational advantages to being bilingual, such as being better able to divide attention between different tasks or understanding the communicative intent of a speaker.

Festival of Social Science

On Wednesday 2 November 2011, DCAL hosted an afternoon event of presentations and discussion on

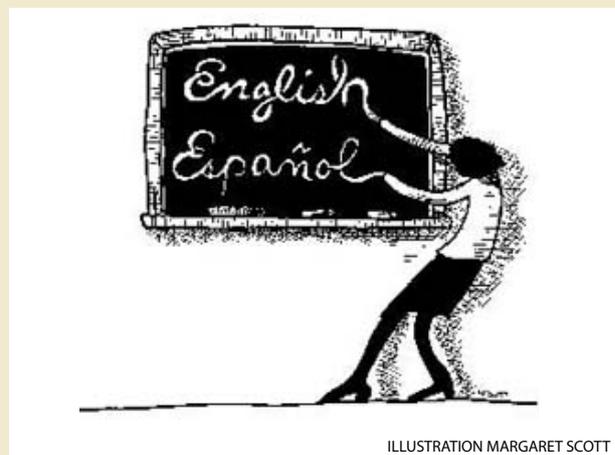


ILLUSTRATION MARGARET SCOTT

bilingualism. The event was part of the Economic and Social Research Council's (ESRC) annual Festival of Social Science. The presentations related specifically to bilingualism in signed and spoken language, but there was also an opportunity for people to think about bilingualism culture and education.

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DCAL deputy director Professor Gary Morgan from City University London, who introduced the event, describes the context: "Deaf children learning English and BSL are bilinguals. We have demonstrated in several areas of our research that these two languages support each other in cognition, literacy and meta-linguistic development. Currently bilingualism research is showing real advantages for hearing children's development, but bilingual education (English and BSL) for deaf children is on the decline. We wanted to address this issue in an ESRC event as it is not Science but instead Economics that appears to be behind the changes to provision of educational opportunities for deaf children."

"Deaf children learning English and BSL are bilinguals. We have demonstrated in several areas of our research that these two languages support each other in cognition, literacy and meta-linguistic development."

Professor Gary Morgan DCAL

Held at University College London (UCL), the event attracted a good mix of academics, general public and professionals working on practical aspects around bilingualism. There were four speakers whose presentations overlapped well, taking the audience through a range of evidence based issues, with plenty of time for audience participation and discussion.

Two languages in one brain

The first presentation was from Professor of Developmental Linguistics at University of Edinburgh, Antonella Sorace, and titled "Two languages in one brain: why bilingualism is an investment for life". In her talk Antonella described some of the research looking at why bilingualism offers advantages for children as well as dispelling some of the myths that surround children learning two languages simultaneously. Children who use two languages seem to be able to get to grips faster with some of the key concepts related to how we understand the world than those

who only use one language. More on Antonella's work and that of her University of Edinburgh research colleagues is available at the web-based information and consultancy service *Bilingualism Matters*. Antonella founded this site to bridge the gap between researchers and the community (bilingual families, educators, and policy makers) in order to enable more and more children to benefit from bilingualism. See <http://www.bilingualism-matters.org.uk/>

The second presentation - "Bilingualism in two sign languages: British Sign Language and Irish Sign Language" - was by DCAL researcher Robert Adam and looked at the relationship between different dialects of British Sign Language and Irish Sign Language. Robert was brought up in a bilingual environment in Australia where both Auslan and Australian Irish Sign Language (AISL) were used by different parents. AISL was brought to Australia by Irish Catholic nuns who taught his mother, whereas Auslan, a language that has similar roots to BSL, was used by his father. This experience has given Robert an insight into bilingualism which has influenced his research into how two sign languages interact with each other in places such as Australia, the Republic of Ireland and in Northern Ireland.

Exploring identity in different cultures

The following presentation was given by Jane Thomas, who is a Specialist Speech and Language Therapist (SALT). Jane is one of the Project Directors of the Life and Deaf Association that has been using poetry as a way of working with Deaf children. Her presentation, "Exploring identity through poetry" discussed this inspirational project which aims to develop Deaf children's self-esteem and communication in signed, spoken and written languages.

In Speech and Language Therapy sessions, the children explored their feelings about their Deaf identity. They created mindmaps from brainstorming, explored poetry about identity in different cultures, developed their vocabulary of emotions and wrote their own unique poetry. As the project developed, the Deaf children worked with Deaf poets, Deaf instructors and actors, to translate their written poetry into BSL and learn to perform confidently and professionally. They then worked with designers, photographers, film-makers

and editors (both deaf and hearing) to create a beautiful book and a DVD of their BSL poetry. Find out more at www.lifeanddeaf.co.uk

Spanish collaborations

The last presentation of the afternoon was by Mar Perez from the Special Education Services in Madrid, titled "Sign bilingual education in the Community of Madrid". This work is being carried out in collaboration with DCAL's Gary Morgan. Mar talked about a project they have been working on together for the last two years looking at how to develop assessments and evaluations of language and cognitive development in Spanish deaf children. Research at DCAL on sign language assessments are providing an evidence base for similar work in Spain. The work also involves Marian Valmaseda in Madrid and Dr. Ros Herman of City University London.

The feedback from the afternoon was very positive,



This classroom photo shows a hearing teacher using Spanish Sign Language to explain a mathematics problem to a hearing child. In other parts of the classroom there are deaf children working.

with fascinating presentations and an engaged audience. DCAL looks forwards to holding similar events in the future. Watch DCAL's website for news of events and opportunities at www.dcal.ucl.co.uk. Alternatively sign up to be added to DCAL's mailing list for publications, press releases and announcements.

DCAL-ASSOCIATED PROJECT UPDATE

Unique BSL resource becomes available to all online

An important development has been made in a project that will be familiar to many DCAL newsletter readers from updates over the last few years: DCAL is pleased to announce that data from the British Sign Language Corpus Project (BSLCP) can now be accessed by all, having gone live online at the end of 2011.

BSL language recordings

Available at the website: <http://bslcorpusproject.org/data>, this resource will continue to develop to become the first national computerised and publicly

accessible BSL corpus - that is a unique collection of language recordings of British Sign Language. The recordings will be of enormous benefit to students and teachers of BSL and to sign language interpreters across the country, leading to improved services for Deaf people that will better ensure their full participation in society.

The BSLCP was funded from 2008 to 2011 by the Economic and Social Research Council (ESRC) and led by staff at DCAL. Project partners are from Bangor University (Wales), Heriot-Watt University (Scotland), Queens

University Belfast (Northern Ireland) and the University of Bristol (England).

The collection of video recordings shows 249 Deaf men and women of different ages and backgrounds conversing in BSL with each other in pairs. They answer questions, tell stories, and show their signs for 102 key concepts. The filming took place in 8 cities across the UK to reflect regional variation within BSL.

Anyone can watch the video clips under the data section of the website - www.bslcorpusproject.org. For general visitors, clicking on the

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image on the left is recommended. Those with a research or teaching interest can access more information via the image on the right. This takes visitors to UCL's CAVA website where anyone can view or download clips, and where researchers can register for a licence to access restricted data.

Wider implications

In addition to practical applications in the UK, the web-based corpus video data is set to contribute significantly to international linguistics research. It will also be a valuable resource for people with an interest in technology, particularly those working towards automatic sign language recognition (the signed equivalent of voice recognition) and the development of virtual signers i.e., signing avatars.

Current BSLCP Director, Dr Kearsy Cormier, explains: "We are very pleased that the BSL corpus video data are now freely available worldwide; this was one of the main aims of the project, but the work is by no means completed. In the future, annotations and translations of the data will be made available online to bring this resource closer to what we mean by a "corpus" today in linguistic research. These annotations will allow anyone to search for specific signs quickly and facilitate peer-reviews of claims about BSL structure and use amongst researchers.

Another aim was to use the data to study why BSL varies and how it is changing, and to investigate frequency of BSL signs – that is to find out which signs are the most common in conversation. These completed studies represent an



Dr Adam Schembri (right) and Dr Jordan Fenlon show the BSL Corpus Project data to colleagues and members of the Deaf community at the DCAL Deaf Open Day, March 2010.

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Dr Kearsy Cormier *BSLCP Director*

important first step towards a better understanding of variation and change and lexical frequency in BSL."

Former BSLCP Project Director, Dr. Adam Schembri (now based at Latrobe University, Australia) explains further: "We expect the BSLCP will contribute to wider research in the field of linguistics worldwide. Internationally the BSL Corpus is one of only a few large sign language corpus projects (along with projects in Australia, The Netherlands and Germany) and it's the second to have video data available online (after The Netherlands)."

Professor Bencie Woll, DCAL Director, expands on the significance of the work: "DCAL hopes the BSLCP video data will lead directly to improved sign language teaching and improvements in training BSL teachers, sign language interpreters and teachers of deaf children. But the BSLCP findings have the potential for much broader impact. Already there are follow-on projects in DCAL making use of the data, which are helping to extend ongoing work on production, comprehension, processing, acquisition and neural bases of BSL."



Members of the Birmingham DCAL Roadshow team (left to right): Robert Skinner (freelance interpreter), Dr Jordan Fenlon (BSL Corpus Project), Robert Adam (DCAL researcher and PhD student), Dr Kearsy Cormier (DCAL Senior Researcher), and Gerardo Ortega (PhD student, DCAL).

TALES FROM THE ROAD

DCAL and the community

Regular readers of the DCAL newsletter will have read that DCAL was to take a Roadshow to six UK cities during 2011. The Roadshow was a chance for DCAL staff to meet with members of the Deaf Community and discuss DCAL's research together. Some readers may be amongst the hundreds who attended the events. Now with the last leg of the tour having been Belfast in September 2011, there's been time for the DCAL team to reflect back on the significance of the tour and how it all went.

Funding for the Roadshow was obtained from the University College London (UCL) Beacons for Public Engagement programme. These awards are given for innovative projects that seek to engage with audiences that the university does not traditionally talk or listen to, or those who are socially excluded.

DCAL postgraduate researcher and member of the Roadshow team, Robert Adam, explains more: "Deaf people do not know as much about their sign language as hearing people know about their spoken language. This is because it is not studied as a language in schools. So Deaf people do not always understand the nature of their language and how being Deaf can influence their experience. Similarly Deaf people do not have equal access to society because not everyone can sign and interpreters are not readily available. This affects peoples' everyday experience and it also affects access to information that can be really important to them. Critically, in the past, research on Deaf people and sign language has often not been accessible for Deaf people. DCAL believes that it's an important part of our role to disseminate research findings in BSL to the Deaf Community."

With the £12,000 funding award DCAL staff were able to travel to Birmingham in March, Glasgow in April, Newcastle and Manchester in May, Bristol in July and finally Belfast.

At each Roadshow, held in Deaf centres, three to four DCAL researchers spoke about their work on different topics. These included language acquisition, the Deaf brain, Deaf interpreters, Deaf people and autism, Deaf people and dementia, the sign segmentation project and the British Sign Language (BSL) Corpus project.

Deaf people who attended the events came via a variety of networks. Other participants included those who work with the Deaf Community such as interpreters and social workers. With a good number of attendees at each event it demonstrated to DCAL that people are really keen to learn about the Centre's work. The feedback was positive, with Deaf visitors saying they enjoyed the days, that the research projects were interesting and well-explained and how good it was to have access to the research that is being carried out by DCAL at first hand. People also came forward with useful suggestions about future DCAL research.

For further details, visit the DCAL website: www.dcal.ucl.ac.uk. More public engagement pages are being added over time and all the presentations from the DCAL Deaf Open Day and DCAL Roadshows will eventually be available. It is hoped that DCAL's website will become a really useful resource for Deaf people to continue to learn about, and get involved in, DCAL's research.

Deaf with Dementia project update

A unique project working to improve life for Deaf people with dementia

Regular DCAL newsletter readers will be familiar to some extent with the Deaf with Dementia (DwD) research project that we reported on in the Spring and Autumn 2010 newsletters. This unique joint project which started in April 2010 (and will finish in December 2012) aims to improve early diagnosis and management among Deaf people who use British Sign Language (BSL). It is funded by the Alzheimer's Society, and is a partnership between the University of Manchester, University College London (UCL), City University London and RAD (Royal Association for Deaf People). DCAL researchers are involved from UCL, as well as DCAL associates based at City University London. The project is led by the University of Manchester.

This research study is the first of its kind anywhere in the world. The team that is carrying it out encompass both Deaf and hearing researchers, and a wide range of professional backgrounds (including social work, speech and language therapy and clinical psychology) as well as multi-disciplinary academic excellence in dementia, Deaf studies, linguistics and neuroscience. The team also includes a key specialist service provider.

Good progress for DCAL's study area

Within the DwD project there are three studies being carried out. DCAL/UCL is primarily responsible for Study1 which focuses on the Older Healthy Deaf Brain. This study includes developing a profile of normal ageing within the Deaf Community from a cognitive perspective. This will be used to develop a screening instrument for dementia in BSL that is culturally appropriate and that is normed for the Deaf population.

DCAL is glad to let readers know that the data collection for the cognitive screening instrument has now finished so that we have norms for healthy Deaf people. A test is now being used clinically to check the scores of people referred for cognitive difficulties against the normal range for their age. This means that in conjunction with DCAL, the National Hospital for Neurology and Neurosurgery (a UCL Partner) in Queens Square, London can offer appointments in their Cognitive Disorders Clinic for Deaf referrals. Appointments are for patient care rather than data collection. For more information about this clinic please see page 14 of this newsletter.

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Mike Webster, EDDJ organiser, draws raffle tickets at the Prestatyn event, together with DCAL staff Tanya Denmark (left) and Frances Elton (centre)

DCAL revisits the England Deaf Derby and Joan club

Previously we reported on the DCAL research team's trip to the October 2010 England Deaf Derby and Joan (EDDJ) club annual get-together at Pontins, Lowestoft, Suffolk. It was with EDDJ members in Lowestoft that the team was able to collect a considerable amount of the data needed to establish the normal profile for healthy older Deaf signers.

Thanks to an award from the University College London (UCL) Beacon Public Engagement programme, four members of DCAL staff attended the October 2011 EDDJ annual holiday get-together, this time held in Prestatyn, Wales, to feed back our results from the previous year and to engage older deaf people with research at UCL using information stalls, posters and fun activities. A bonus of the visit was that the team was also able to complete data collection. Thanks to their willingness to take part in the research the team recruited 13

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participants from the EDDJ aged between 80-89 years. In all, the DwD project has been able to collect data from 226 Deaf people, with ages ranging between 50 and 89. This is an impressive achievement.

Engaging with research participants

The EDDJ event was a useful experience for the DCAL team in seeing how they can best work in engaging with the public so that research experiences can be rewarding for all involved. Based on feedback from EDDJ attendees from 2010 and a suggestion to be more interactive, the DCAL team did a "poll" with two tin cans and counters and asked people if they wanted the team to come back the following year and do more of the same. Happily 95 said yes and only 3 said no!

The DCAL staff took some posters and information materials with them to Prestatyn. They used the opportunity to present some early DwD findings to the attendees, who were keen to find out how the project has been progressing after meeting the team at Lowestoft the year before. The team also filmed a few people and asked what they thought of DCAL's presence at the EDDJ and did a famous faces quiz which was very popular, with about 200 people taking part and with raffle tickets given for participation. At the end of the week DCAL held the raffle with shopping vouchers as prizes, and this event was also filmed. Finally the team provided the holiday-makers with general DCAL information such as newsletters and information about other studies, as well as giving out free

UCL and DCAL pens, rubbers and chocolates.

The DCAL team also had some general leaflets about what to do if people are worried about their own memory, which include some useful contacts. They were also able to tell EDDJ about the Cognitive Disorders Clinic at the National Hospital for Neurology and Neurosurgery in London.

The DCAL team received a very positive response from people at the EDDJ and would like to thank both the EDDJ committee and attendees for their support. The team is looking forward to providing full results in the near future.

FIND OUT MORE, GET INVOLVED!

To find out more about the Deaf with Dementia research project and to keep up to date with progress, please go to the project web site for information in both BSL and English: <http://www.nursing.manchester.ac.uk/deafwithdementia/>

In addition the project is presently seeking people from the general Deaf community who have been diagnosed with dementia (and their carers) to take part in an interview about their experiences of living with dementia day to day. This is part of Study 2. See the website for details.

The Deaf with Dementia project

Objectives

The research project is:

- Developing a screening instrument for dementia in BSL that is culturally appropriate and normed for the Deaf population
- Investigating the experience of dementia directly with Deaf people and their carers in order to provide an evidence base for culturally sensitive service provision
- Working with the wider Deaf community and service providers (such as the Alzheimer's Society) to better understand key features of acceptable and targeted information and support for Deaf people

The Government has released a policy document: Living Well with Dementia: A National Dementia Strategy (published February 2009). The three broad objectives which underpin the Deaf with Dementia specific research studies were designed to dovetail with the National Dementia's Strategy's emphasis on: early identification; broad based community awareness; improved information provision; outcome driven service provision, where outcome also encompasses cultural sensitivity/acceptability.



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The Deaf with Dementia project

Public understanding of why we are concentrating on Deaf people with dementia.

The National Dementia Strategy in England has reached an implementation phase and questions are being raised about the needs of specific populations who have dementia. The Deaf with Dementia project has been asked several times to explain what we mean by Deaf people and whether the work applies to everyone who might have a 'hearing loss'.

Principal Investigator of the Deaf with Dementia project Professor Alys Young, from the University of Manchester, has supplied this briefing on behalf of the whole team, which policy makers and ministers have found helpful:

Definitions and populations

Although it's true to say that around 1 in 6 people have a hearing a loss of some kind and the prevalence of this increases dramatically with age, deaf people and Deaf people (with a capital D) are very different populations. Generally speaking deaf (with lower case d) is used to refer to people who use spoken language, some of whom may have done this from childhood, and others who have

Although it's true to say that around 1 in 6 people have a hearing a loss of some kind and the prevalence of this increases dramatically with age, deaf people and Deaf people are very different populations

lost their hearing gradually or indeed as a result of ageing. Colloquially people use terms like 'hard of hearing' and 'hearing impaired' to refer to these groups. Deaf with upper case D refers to people who in audiological terms have a hearing loss but whose defining feature is the language they use and their cultural affiliation i.e. British Sign Language (BSL) users who regard themselves to be part of the Deaf community. Around the world, they are therefore often referred to as Sign Language Peoples,

rather than Deaf people. This group is best considered to be a cultural/linguistic minority group in the UK whose issues of access and equality will encompass language rights and cultural equality (in the same way Welsh people's do). Population estimates for the UK range between 50,000 and 70,000 Deaf BSL users.

Language and literacy

For a variety of reasons early childhood deafness interferes with the usual processes of achieving literacy for many d/Deaf people (whether sign language users or spoken language users). New advances in early identification of deafness, better early intervention, improvements in technological support (digital hearing aids and cochlear implants) and the recognition of BSL as a valid full language through which English might be acquired as a second language, are all promising much better literacy for d/Deaf people in the future. However the current generation of older Deaf people (and many of those who use spoken language but have been deaf from early childhood,) are likely to have low levels of literacy. The average reading age is around 9 years old.

Culture

The cultural claims of Deaf people are founded on strong evidence of traditions, norms of behaviour, shared histories, and more generally ways of thinking/attitudes that are clearly associated with life experience as a Deaf signing person within Deaf communities. This point is quite straightforward to grasp if one considers that any language will have an associated cultural group or indeed groups (e.g. French people and French Canadians). The many centuries of non-recognition of the cultural and linguistic status of Deaf people has meant that these features have not been valued and understood.

In the Deaf with Dementia research project, the culture of Deaf people is being investigated as the starting point in the identification of markers of acceptable and preferred outcomes in dementia care.

Cognitive disorders clinic

Do you know a Deaf British Sign Language (BSL) user who has developed memory or thinking problems? Appointments are now being offered for Deaf patients at a top UK neurology hospital

DCAL is working with the specialist Cognitive Disorders clinic, at the National Hospital for Neurology and Neurosurgery, Queens Square, London to provide assessment services to Deaf British Sign Language (BSL) users worried about their memory or cognition.

Diagnostic assessment of neurodegenerative conditions for Deaf people has traditionally been problematic due to a lack of standardised neuropsychological assessment tools in BSL. New cognitive screening tests are now available at the clinic which is accepting referrals of patients who are Deaf BSL users. Deaf patients will be seen within the existing cognitive disorders service for full medical and neuropsychological assessment. Team members are fluent in BSL or use the services of a BSL interpreter.

A UCL partner

The Cognitive Disorders Service runs in parallel with the Dementia Research Centre (DRC), part of the Department of Neurodegenerative Disease at the University College London (UCL) Institute of Neurology (ION). The clinical and research components form a national centre of excellence for diagnosis and treatment of patients with cognitive problems, and the group is recognised internationally for ground-breaking research in dementia.

You can find out more at the National Hospital for Neurology and Neurosurgery website: <http://www.uclh.org/OurServices/ServiceA-Z/Neuro/CDC/Pages/Home.aspx>

The DCAL contact for this service is: joanna.atkinson@ucl.ac.uk

There are some important stipulations for patient referral:

- The clinic is only accepting referrals of Deaf BSL users with acquired rather than developmental cognitive difficulties where a decline

in function has occurred in adulthood, particularly those with suspected dementia or neurodegeneration.

- At present the clinic is unable to accept referrals of deaf patients who do not know BSL. It is essential that the patient is a sign language user.
- Referrals are accepted from anywhere in the UK and should be made from the patient's GP and clearly detail the problem. The GP must state in the referral letter that the patient is a Deaf BSL user; otherwise they can not be offered an appointment that is suitable for Deaf patients.

The GP should send their letter of referral to:
Dr Cath Mummery, Consultant Neurologist
Specialist Cognitive Disorders Service
National Hospital for Neurology and Neurosurgery
8-11 Queen Square
London WC1N 3BG

SHARING RESEARCH – ICONICITY AND EMBODIMENT ON TOUR

In the press, at the podium

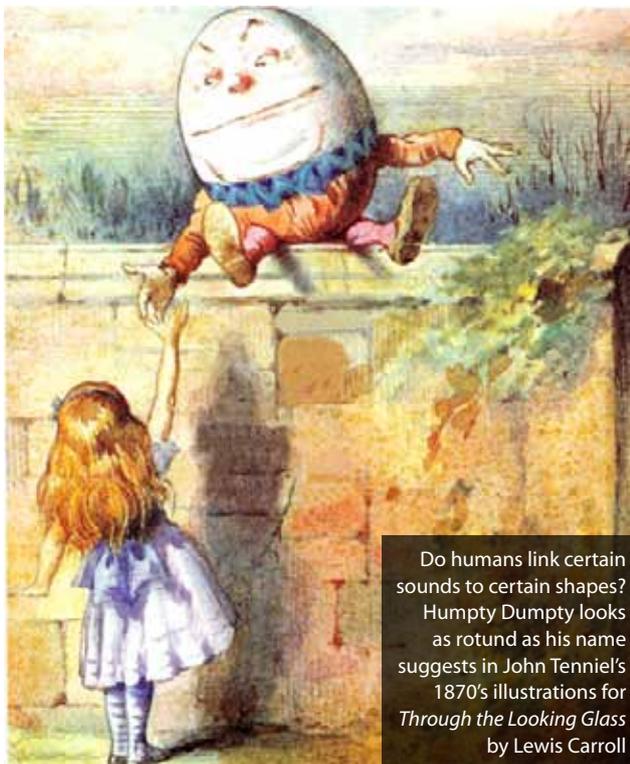
DCAL Co-Director Professor Gabriella Vigliocco, who is also Professor of the Psychology of Language in the Department of Cognitive, Perceptual and Brain Sciences at University College London, and Director of the Language and Cognition Laboratory at University College London, has been able to take her research work on iconicity and embodiment in language to

a wide range of audiences over several months - to international academic audiences at a number of conferences and to the wider community via contributing to a fascinating article in New Scientist magazine published in August 2011 by David Robson, Biology Features Editor ([see http://www.newscientist.com/article/mg21128211.600-kiki-or-bouba-in-search-of-languages-missing-link.html?full=true](http://www.newscientist.com/article/mg21128211.600-kiki-or-bouba-in-search-of-languages-missing-link.html?full=true)).

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Deafness Cognition and Language (DCAL) Research Centre www.dcal.ucl.ac.uk

The idea for the article came about after he read the paper by Pamela Perniss, Robin Thompson and Gabriella Vigliocco, published in *Frontiers in Psychology* (2010) discussing iconicity in signed and spoken languages (see http://www.frontiersin.org/language_sciences/10.3389/fpsyg.2010.00227/full)



Do humans link certain sounds to certain shapes? Humpty Dumpty looks as rotund as his name suggests in John Tenniel's 1870's illustrations for *Through the Looking Glass* by Lewis Carroll

Iconicity and Lewis Carroll

Broadly, iconicity is the conceived similarity between the form of a sign (linguistic or otherwise) and its meaning. The *New Scientist* piece brings this concept to life with its reference to Lewis Carroll's *Through the Looking Glass*, quoting the passage where Alice and the enormous egg-shaped Humpty Dumpty meet. In response to Alice's questioning Humpty Dumpty's assertion that a name must mean something, he replies "Of course it must....My name means the shape I am – and a good handsome shape it is, too. With a name like yours, you might be any shape, almost."

A journey through the history of linguistics

The article starts out by briefly tracing the long history in the study of linguistics in which so many have held the assumption that "words are just collections of sounds - an agreed acoustic representation that has

little to do with their actual meaning". It then goes on to discuss the intriguing findings of various individuals over the centuries who went against received wisdom, suggesting rather that humans seem instinctively to link certain sounds with particular sensory perceptions. In particular Robson cites the pioneering research (1929) of German psychologist Wolfgang Kohler whose work asking people to label two meaningless shapes – one spiky and the other curved as either *takete* or *baluba* – provided a turning point (most DCAL Newsletter readers will no doubt also choose *takete* for the spiky shape and *baluba* for the curvy one). The author quotes Gabriella when reflecting on how Kohler's findings attracted little attention, and that although others returned to the subject every now and then, the findings were not taken seriously by the mainstream.

The rest of the article explores what David Robson terms a "spate" of research around iconicity and related areas that has taken place since 2000. This research as a whole suggests "some words really do evoke Humpty's 'handsome' rotundity. Others might bring to mind a spiky appearance, a bitter taste, or a sense of swift movement. And when you know where to look, these patterns crop up surprisingly often, allowing a monoglot English speaker to understand more Swahili or Japanese than you might imagine."

Robson debates whether this combined research evidence makes a strong enough case that sound symbolism pervades human language, whilst he also acknowledges that big questions remain. In his article he roams around the research findings - how humans link certain sounds to certain shapes, or to flavours and styles of movement; and considers how sound symbolism could shed light on the origins of language: "while there's good reason to believe that humans first developed the neural toolkit for language through hand gestures, for example, how did we make the transition to the spoken word?"

Again Robson quotes Gabriella: "Manual gestures seem like an obvious way [to imitate], but vocal imitation is possible as well, from imitating the shape of an object with the shape of the mouth, to imitating the size of an object by adjusting the length of the vocal tract."

The whole *New Scientist* article is fascinating and must surely inspire readers to consider examples of iconicity

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in everyday life and in spoken languages, and ways in which our own senses respond to different words and concepts. For DCAL's Gabriella and her research team, the subject goes into deeper areas and to places where spoken language and sign language meet; given that in order to understand how language and cognition relate to each other we need to account for iconicity in both signed and spoken languages.

And so to Spain

On 30 September 2011 Gabriella Vigliocco spoke at the Symposium on Embodiment titled, "Where is Embodiment Going?"; sponsored by the Association for Psychological Science (APS), at the European Society for Cognitive Psychology (ESCP). The symposium was held at Donostia-San Sebastián, Spain. Gabriella was one of four speakers, together with Arthur Glenberg (Arizona State University, USA), Gün R Semin (Utrecht University, Netherlands) and Bernhard Hommel (Leiden University, Netherlands).

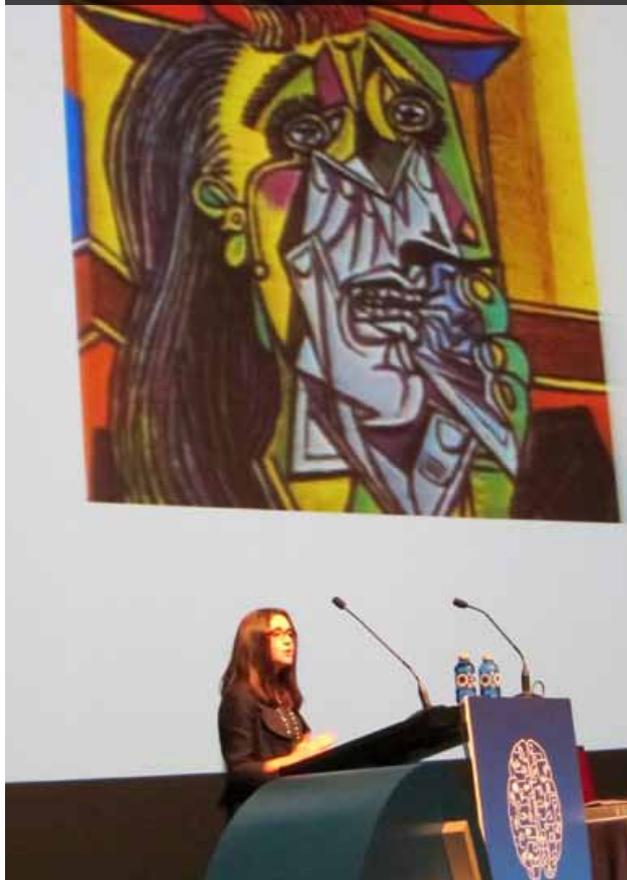
Embodiment

Briefly, embodiment is the idea that human cognition, including language, thinking and our social behaviour is grounded in the brain's and body's physiology. It represents a new theoretical direction for research that contrasts with previous views according to which human cognition was seen as fully separate from other brain's functions like perception and action. While it is quite intuitive to think that thinking about running may evoke in the mind sensations of actually running, as advocated by embodiment theory, it is far less intuitive to link abstract notions such as "culture," "religion" etc to bodily states.

In her presentation Gabriella discussed how abstract concepts can be embodied, arguing that they are grounded in our inner emotional states. Connecting abstract concepts with emotional states could play a key role in making abstract concepts learnable, given that these concepts are otherwise harder (because less familiar, harder to imagine and often with less well defined meanings) than concrete concepts.

Gabriella focused on research carried out with David Vinson, Stavroula Kousta, from UCL and Stefano Cappa from San Raffaele, Milan, showing that abstract words tend to have emotional associations far more often than concrete words and that this difference implies

DCAL's Professor Gabriella Vigliocco presents at the Association for Psychological Science (APS) Symposium on Embodiment titled, "Where is Embodiment Going?" at the European Society for Cognitive Psychology (ESCP), September 2011, Spain.



Gabriella believes that iconicity is central to embodiment because it is via iconic links that language may become connected to events in the world.

that abstract words recruit emotion systems in the brain more than concrete words. In collaboration with Neil Fox, Daniel Roberts and David Vinson, she is continuing to investigate how embodiment applies to signed and spoken languages in projects sponsored by the ESRC and National Institute of Health, USA, linked to DCAL.

Gabriella believes that iconicity is central to embodiment because it is via iconic links that language may become connected to events in the world. Think of the child learning language: how does she know that the word "cat" in English refers to that furry animal?

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Perhaps the fact that the first label often used in spoken English is “meow” helps, given that “meow” sounds similar to the noise made by the animal.

The ESCOP conference, founded in 1985, is the foremost conference for Cognitive Sciences in Europe. It has been held bi-annually in different European countries since 1999. The September 2011 conference was attended by nearly 1,000 people, mainly from Europe, but also from a variety of other countries.

Gabriella sums up from a busy time taking her research to a varied audience as follows: “It is a great time to study language and cognition. Embodiment as thought of right now is too simplistic to explain how people think, but this theoretical framework is giving us new exciting directions for research, especially in sign language. This is exactly how progress is made in science.”

More information is available on the symposium on the APS website at: http://www.psychologicalscience.org/index.php/publications/observer/obsonline/symposium-on-embodiment-at-escop-2011-in-donostia-san-sebastian-spain.html#high_2.

Moreover, you may like to know that Gabriella will bring the issue of embodiment to an event (titled: “How the Body shapes the Mind”) for the British Association of Science Festival of British Science, which will be held in Dundee, September 4-7, 2012, and which will include Gun Semin, Arthur Glenberg and Stefano Cappa as speakers.

WHAT IF?

Iconicity in the New Year

More or less at the time this newsletter is sent out to you, on 7 and 8 January 2012, a workshop organised by DCAL’s Professor Gabriella Vigliocco and titled “WHAT IF... the study of language started from the investigation of signed, rather than spoken, languages?” will be taking place in the Psychology Building at University College London (UCL). Sponsored by the Experimental Psychology Society (EPS) with further support from DCAL and the Cognitive, Perceptual and Brain Sciences (CPB) Research Department at UCL, more information will be made available after the event to all interested – either via a DCAL press release or in the next DCAL newsletter. However for those wishing to know more sooner, the best is to visit the workshop website: <https://www.ucl.ac.uk/psychlangsci/research/CPB/eps-workshop/overview>

In advance of the workshop, the overview is as follows:

The status quo

Our understanding of the cognitive and neural underpinnings of language learning and processing has been highly influenced by the fact that empirical research and theoretical development has been based on spoken language. Since the 1970s, researchers have begun to recognise the importance of investigating signed languages in order to determine which aspects

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Professor Gabriella Vigliocco

A snapshot insight into the work of DCAL’s Professor Gabriella Vigliocco

I lead a team composed of psychologists, sign linguists, computer scientists and cognitive neuroscientists sharing the vision that understanding language and cognition requires integration of multiple levels of analysis and methodological approaches.

The overarching goal of our work is understanding how language and other aspects of cognitive functioning relate to each other.

Over the years, we have contributed to the understanding of how we represent meaning, how cognition shapes language and how language shapes cognition. We have challenged many traditional ideas about language, such as the notion that language is a modular and purely symbolic system that does not entail direct links with our sensory-motor and affective experience. We have developed theoretical and computational models of how meaning is represented and how sentences are produced that account for language performance in terms of interactions among different types of linguistic and non-linguistic information.

of language can be considered to be universal and which, instead, ought to be regarded as modality-specific. However, the study of sign languages has been driven in large part by the theoretical ideas developed for spoken languages. As a result, the general approach has been to assess when sign languages behave like spoken languages (supporting universals) and when they do not (supporting modality-specific features of language).

The challenge

This workshop sets to challenge this approach by asking whether the traditional theoretical ideas about language that have been developed so far would, in fact, have played a central role in our thinking if we had started the investigation of language based on visual, rather than acoustic, systems. In order to make this very broad issue tractable, we plan to focus on two separate but related areas, both of which have begun

to receive attention: *iconicity and multiple channels of communication (especially the integration of manual and oral/mouth actions)*.

Speakers

Eminent speakers who will be joining Gabriella to discuss these two areas include: Adam Kendon (University of Pennsylvania, USA), Sotaro Kita (University of Birmingham, UK), Karen Emmorey (San Diego State University, USA), Ulf Liszkowski (MPI for Psycholinguistics, NL), Padraic Monaghan (Lancaster University, UK), Asli Özyürek (Radboud University Nijmegen & MPI for Psycholinguistics, NL), and Jeremy Skipper (Hamilton College, USA). Discussants are DCAL Director, Bencie Woll and Marty Sereno (University College London, UK).

We hope readers will enjoy finding out more via the UCL website. DCAL looks forward to giving further updates on these research areas in the near future.



Get involved in DCAL's research!

Inspired by DCAL's work? Would you like to get involved in our research projects into sign linguistics, psychology and neuroscience, and help in a practical way?

Then sign up for DCAL's volunteer database. When a project comes up that matches your experience we will contact you to invite you to come along and be involved.

Volunteering your time occasionally is a great way to help DCAL achieve successful outcomes with its projects that aim to improve life for d/Deaf people. Volunteers say they like contributing to this important work and enjoy the challenge of the tasks as well as the social interaction with the DCAL team and other volunteers. We like to think that all of our projects are interesting - sometimes they can be lots of fun too! Check out our report about DCAL's recent visit to the England Deaf Darby and Joan club (page 11)

You can join the volunteer database by visiting the DCAL website at www.dcal.ucl.ac.uk. Just click on the 'research participation' link on the left side of the page and this will take you to the registration webpage.

A DCAL researcher will contact you if a project comes up where you could get involved, but there's no obligation to say yes if it doesn't suit you. Other opportunities are likely to come up again in the future. DCAL adheres to a strict code of conduct and ethics in its work, and of course this includes all research participants too. All data and personal information is treated in accordance with the Data Protection Act 1988.

DCAL would be glad to hear from the wider deaf population as well as from the Deaf Community, and as DCAL researchers travel all over the country to carry out data collection we welcome volunteers from everywhere.



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