



ECONOMIC AND SOCIAL RESEARCH COUNCIL KEY FINDINGS REPORT

The Key Findings Report should be completed and submitted using the **grant reference** as the email subject to, reportsofficer@esrc.ac.uk on or before the due date.

Please complete each box as fully as possible, adhering to the word counts, please do not include images within the text. Appendices are not accepted.

Principal Investigators are expected to consult with co-investigators on the content of this report.

Grant Reference:	ES/K003364/1
Investigator/s:	Principal Investigator: Kearsy Cormier; Co-investigator: Adam Schembri
Project Title:	Describing sociolinguistic variation in verb directionality in British Sign Language: A corpus-based study

1. Summary of Project Findings (circa 500 words)

Please summarise your main findings from the project. You are also invited to briefly indicate any plans for further research in this, or a related area.

Directional verbs (‘agreement’ (Padden, 1983)/‘indicating’ verbs (Liddell, 2000)) in sign languages, e.g. GIVE in British Sign Language, can be directed towards locations in space associated with their arguments. Some have argued this modification is fundamentally the same as grammatical agreement in spoken languages, is obligatory, and is often accompanied by grammatical non-manual markers such as eye-gaze (Neidle et al., 2000; Lillo-Martin & Meier, 2011). Others propose this modification is fundamentally different from agreement, representing instead a fusion of linguistic and gestural (specifically pointing) elements (Liddell, 2000).

In this project, we considered linguistic and social factors in the use of directional verbs in conversational data from the BSL Corpus (www.bsllcorpusproject.org/data, n=1680). Preliminary results reveal that modification of directional verbs occurs for both subject (66%) and object arguments (64%), but not obligatorily for either. Furthermore, 3rd-to-3rd person modification is rare, occurring in only 7% of our data. (Examples of prototypical directional verbs in the literature involve 3rd-to-3rd person modification (e.g. JOHN POINT_a MARY POINT_b aASK_b “John asked Mary”, where the verb ASK moves from the location associated with John to the location associated with Mary)). Finally, constructed action (i.e.

nonmanual enactment/embodiment) co-occurred with 65% of tokens where eye-gaze was directed towards a subject or object.

The rate of modification suggests that directionality in BSL is not obligatory; while this may be attributed to ongoing grammaticalisation processes, no social factors were significant thus no evidence was found of language change across age groups. Instead, our results appear to suggest that directionality is a pointing-based reference tracking system, aligning with the cognitive/functional view that directional verbs represent a fusion of linguistic and gestural elements (de Beuzeville et al., 2009; Liddell, 2000). Additionally, these findings highlight the importance of using corpus data for (sign) linguistics research, to verify or counter previous claims based on little data.

These findings have been presented at in 2014 at the Annual Meeting of the Linguistic Society of America, the Conference of the International Society for Gesture Studies, and the UK Cognitive Linguistics Conference. A series of 2-3 journal articles are in preparation for submission to high impact linguistics journals: one on variation and change in BSL directional verbs generally (by the end of 2014), and one or two on direction of movement (exploring the relative lack of 3rd to 3rd person modification) and the role of eyegaze and constructed action with directional verbs, to be submitted in early 2015.

Future plans relevant to this topic include a crosslinguistic, cross-corpus project on pointing signs and pointing gestures (“When do gestures become linguistic? Understanding the gesture-language interface through a corpus-based study of pointing signs in sign languages” Australian Research Council, 2014-2017) with Chief Investigators Trevor Johnston (Macquarie University, Sydney), Adam Schembri (Co-Investigator on current project) , with Partner Investigators Onno Crasborn (Radboud University, Nijmegen, Netherlands) and Kearsy Cormier (Principal Investigator on current project). Additionally we are planning future projects on the syntax of British Sign Language from a usage-based, cognitive/functional perspective, and on morphology and sociolinguistic typology in sign languages.

2. Exploitation Routes(circa 250 words)

Please describe the process and activities through which you plan to ensure that your findings obtain the maximum potential impact. This can include both scientific impact and economic and societal impact.

In terms of scientific impact, journal articles we are preparing will be submitted to a variety of journals to maximise visibility and impact. Another important outcome of the project is completion of 50,000 lexical annotations of conversation data from the BSL Corpus from 4 regions (London, Manchester, Bristol & Birmingham) which are being made available online (www.bsllcorpusproject.org/data); these will be an invaluable resource to other researchers. Finally, we will build on all of the linguistic annotations (and annotation protocols) from this project to use for future projects using the BSL Corpus data (e.g. lexical and clause-level annotations for planned projects on syntax and morphology).

In terms of societal impact, we plan dissemination via (1) a research article in British Deaf News, the magazine of the British Deaf Association, for outreach to the British Deaf community and (2) a presentation to BSL tutors (e.g. Association of British Sign Language Tutors and Assessors).

One impact which will be both scientific and societal is inclusion of information about verb directionality in BSL SignBank, the online lexical dictionary and reference grammar under development at the Deafness, Cognition and Language Research Centre that will be launched in late 2014. This will be the

first time directionality information will be available in a dictionary that is usage-based, for any sign language. This is important information for BSL teachers, students and interpreters as well as researchers.

3. Potential use in a non-academic context (circa 250 words)

Please outline any anticipated or potential economic or societal impacts that you believe your project might have in future on the 'user' community.

This project will have several impacts on the 'user' community, which is primarily British Sign Language teachers, students, interpreters, interpreter trainers and other (sign) language professionals working with Deaf people.

Firstly, there are clear implications for how directionality should be taught to learners of BSL. The sign linguistics literature contains many examples of 3rd-to-3rd person modification as noted above in (1) and therefore, this structure is taught by many BSL teachers as a standard/prototypical way of using directional verbs. The fact that we found this structure to be so low in frequency (only 7%) suggests that this structure could be taught as possible but should not be taught as prototypical to learners. Instead, our findings suggest that the use of first person modification with directional verbs, with simultaneous use of constructed action, should be taught as a more frequent use of directionality.

Secondly, the inclusion of verb directionality in BSL SignBank (dictionary and reference grammar) will be invaluable to the user community. The fact that this information will be included in BSL SignBank dictionary and reference grammar, and will be constantly updated as work continues on the BSL Corpus means that this key information will be available to various users including learners, even as the language changes. This will be a vast improvement over verb directionality information as given in the only other linguistically-organised BSL dictionary (Brien 1992), which according to our findings in many cases is outdated and/or inaccurate.

4. URL

If your project has its own website/web page, please enter the URL here.

<http://www.bsllcorpusproject.org/projects/directional-verbs-project/>

5. Sector Coding

Please select the sector(s) from the list that best indicates where the findings of your grant will potentially be of most relevance to (*delete those not applicable*):

Communities

Education

Information and Communication Technologies

Social Diversity

Following completion of your report please:

- email your completed report to reportsofficer@esrc.ac.uk ensuring you have adhered to the word count and completed each box as fully as possible.
- ensure you have offered any data arising to the UK Data Service <http://www.esrc.ac.uk/funding-and-guidance/grant-holders/datasets.aspx>
- retain records of any activity, outputs and impacts as these details can be added to the new output system which will replace the Research Outcomes System (ROS) from September 2014.