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Accent or not? Language attitudes towards regional variation in British Sign Language

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Abstract: British Sign Language (BSL) has been shown to have a high degree of regional variation especially at the lexical level. This study explores awareness and attitudes of the British deaf community towards this regional variation. We studied interview data from the BSL Corpus (<http://bslcorpusproject.org/data>) from 121 deaf, BSL signers from six regions across the UK including Belfast, Birmingham, Bristol, Glasgow, London and Manchester, focusing on responses to five questions in relation to regional variation in BSL. Responses were analysed using thematic analysis, following (Braun, V. & V. Clark. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2). 77–101. <https://doi.org/10.1191/1478088706qp0630a>). Findings reveal that BSL signers exhibited overall high levels of meta-linguistic awareness, as many of their attitudes and beliefs were in line with what has been reported in relation to linguistic behaviour with BSL such as mouthing, fingerspelling and accommodation. In addition, BSL signers seem to place enormous value on regional variation in BSL, believing that such variation contributes to the richness of BSL as a language and puts it on equal footing with the surrounding majority language, i.e. English. We explore the implications of these attitudes towards a broader understanding of language ideologies, including the concept of accent.

Keywords: accent; attitudes; sign language; standardisation; variation

1 Introduction

Many studies on language attitudes in spoken languages have focused on attitudes towards regional accents, with standard varieties being compared to non-standard varieties (Giles and Rakić 2014; Milroy 2001). Other spoken language attitude

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studies have looked at variation, dialect and speech style, use of minority languages, learning a new language, and language preference (Baker 1992). In this paper we report on language attitudes within the British deaf community about regional variation in British Sign Language (BSL), a minority language used in the UK. The presence of regional variation in BSL at the lexical level is well documented (Stamp 2016; Stamp et al. 2014, 2016; Sutton-Spence and Woll 1999). However, very little is known about the attitudes and beliefs of BSL signers with regards to this regional variation in BSL. Studying this allows us to gain insight into the relationship between attitudes and behaviour which has never been studied on a large scale for sign languages before. In this paper we ask: Are signers aware of regional variation in BSL and if so, to what extent? What are their attitudes towards regional variation in BSL?

1.1 Language attitudes about sign languages

Studies of languages attitudes generally are considered to be important for several reasons. Attitudes can explain how language variation is distributed, the level of knowledge that a person has over their own language and even predict behaviour (Ladegaard 2000; Wicker 1969). Language attitudes can have a major influence on language and educational policies, e.g. attitude surveys often provide valuable information for language planners (Ruíz 1984). Sometimes this language planning can have disastrous consequences (Kaplan et al. 2011), as is often the case in deaf education (Humphries et al. 2014). In relation to sign languages, the study of language attitudes is considered to be extremely important, as it is intrinsically linked to policies in deaf education, which is a major issue worldwide (Burns et al. 2001).

Although deaf people in the UK have used sign language for centuries (Jackson 1990; Kyle and Woll 1985; Ladd 2003), sign language is rarely used in education, even today. This is largely due to misconceptions about the language itself and its impact on educational attainment. Generally, many professionals working with deaf children and their families (e.g. in medicine and education) believe that sign languages are not real or full languages and would prevent deaf children from learning to speak. In the past, deaf children were often penalised in schools for signing. Even when sign language has been used in education, teachers would often use more English-based signing.¹ Earlier studies on ASL (American Sign

¹ English-based sign systems such as Signed Exact English (SEE) in the US or Sign Supported English (SSE) in the UK use some manual signs from the surrounding natural sign language but using English grammar (and often spoken simultaneously with English). These English-based systems are different from natural sign languages which arise naturally in deaf communities like ASL and BSL which are grammatically different from spoken languages like English.

language) showed that this led to students believing that ASL is ‘broken English’ or ‘bad English’ (Kannapell 1989). Ward Trotter (1989) explored attitudes of teachers towards deaf ASL signers and found that teachers’ language attitudes influenced their relationship with students, which impacted interactions in the classroom. In addition, Ward-Trotter (1989) found that teachers rated English-based signing higher than ASL using matched-guise techniques. In relation to BSL, Ladd (2003) explains that deaf people have formed internalised, negative attitudes about sign languages and this is probably largely due to hearing people’s attitudes towards sign languages, e.g. hearing educators working with deaf children often have negative attitudes towards deafness and sign languages (Krausneker 2015). More recent studies have shown that deaf people’s own language attitudes towards sign languages are becoming more positive (Hill 2012; Supalla and Clark 2014). For example, Hill’s (2012) seminal study into language attitudes of deaf people towards ASL and English based signing using match-guise techniques, found that comments from deaf people became increasingly negative as the signing became more ‘English like’. Signers who used English features in their signing were said to ‘look hearing’ and within deaf communities this is not a compliment. This change in language attitudes has occurred for several reasons: research in the 1960s and 1970s showed that sign languages like BSL and ASL are in fact real languages (Brennan 1975; Stokoe 1960); sign languages are more visible in the media (De Meulder 2018; Stamp et al. 2014); official recognition of sign languages has occurred in many countries (De Meulder 2015); and, there has been a huge rise in the number of hearing people learning sign languages in many countries (De Meulder 2018).

There is now a growing body of work exploring language attitudes in different sign languages. These have focused on attitudes towards sign languages in general (Burns et al. 2001; Krausneker 2015; Kusters 2014), attitudes surrounding language planning, policy and revitalisation (De Meulder 2018; McKee 2017; Snoddon 2018), attitudes towards bimodal bilingualism in ASL and English (Mitchiner 2014), attitudes of deaf students towards sign languages (Fenn 1992; McDonnell 1992; Matthews 1996), and impact of language attitudes on the recognition of sign languages (Conama 2020). However, very few studies have explored attitudes towards social variation in sign languages, including attitudes towards regional variation. Baer et al. (1996) explored attitudes towards different regional groups of ASL signers and found some evidence that some variants in ASL were viewed more positively than others. For example, some respondents felt that signing at Gallaudet University in Washington, D.C. (the only university in the world for deaf and hard of hearing students) was hard to keep up with, which led them to believe that signing should be the same across the USA (Baer et al. 1996). Others mentioned that sign variants in Washington D.C. are ‘proper’ and that people sign faster in

Washington D.C. In addition, some sign variants were considered better than others: e.g. when referring to Horace Mann School for deaf children in Boston, some felt that ‘Horace’ should be fingerspelt rather than signed using the ASL sign for ‘horse’ as some signers do (as the word ‘Horace’ resembles the word ‘horse’). One of the respondents said that they would correct a person’s signing if they caught them using the ‘wrong’ variant. In another study, Eichmann (2009) explored attitudes of DGS (German Sign Language) teachers towards sign language standardisation across Germany. She found that participants felt that calls for standardisation usually came from outside of the sign language community, which they considered to be a threat to their language and community.

The studies on language attitudes in ASL and DGS covered in this section have thus looked at attitudes towards signed vs spoken language and some towards regional variation. Before we go on to explore language attitudes towards regional variation in BSL, we need to first look at documentation of regional variation in BSL in terms of linguistic behaviour.

1.2 Regional variation in BSL

In BSL, there is extensive regional variation at the lexical level and a considerable amount of research documenting this, especially in the use of signs for colours, numbers, countries and UK place names (Brown and Cormier 2017; Proctor 2016; Quinn 2010; Stamp 2016; Stamp et al. 2016; Sutton-Spence et al. 1990). Despite this variation, it has been consistently reported that comprehension levels between signers of different regions are quite high (Elton 2010; Stamp et al. 2014; Woll et al. 1991). However, this has not always been the case, as in the 1980s, signers reported that they did not easily understand people from other regions (Jordan and Battison 1987; Kyle and Allsop 1982). At the time, 40% of the people interviewed reported that they had never met a deaf person that lived over 125 miles away and less than half of the people interviewed had travelled more than 50 miles away in that year (Kyle and Allsop 1982). This may explain why mutual intelligibility was quite low amongst signers of different regions at that time. In addition, some regional variants have been reported to be more difficult to understand than others. Kyle and Allsop (1982) reported that people residing in the Avon area of the UK (South West) found those who lived further up North more difficult to understand, with Scottish signers considered the most difficult. Interview data from Woll et al. (1991) show that signers around the UK reported people from Northern Ireland as the most difficult to understand (44%), with signers from Scotland considered the second most difficult to understand (13%). Mutual intelligibility has increased since then, however. In 1981, the long-running BBC television programme for BSL signers, See

Hear, was first broadcast. Clive Mason, a long standing presenter of *See Hear*, started presenting on the show in 1984 and being Scottish himself, it was the first time signers from all over the UK had regular exposure to another regional variant of BSL (Elton 2006, 2010). The increased exposure to regional varieties of BSL via media outlets such as this, followed then by the Internet, as well as increased travel have all contributed to increased language contact between regions and therefore also the increase in mutual intelligibility amongst BSL signers since that time (Stamp et al. 2014; Sutton-Spence and Woll 1999; Sutton-Spence et al. 1990).

One result of this increase in language contact across regions is that some signers accommodate to others. In a study on accommodation focusing on lexical signs, Stamp et al. (2016) found that signers from Glasgow and Manchester exhibited the most short-term accommodative behaviour compared to signers from other regions. Older signers were also less likely than younger signers to accommodate to their conversational partner. However, rates of accommodation were overall fairly low. In addition, with or without accommodative behaviour, signers from different regions were able to converse with one another with relative ease. In a separate study, BSL signers struggled to understand signs for colours when produced in isolation and without any English mouthing (Stamp 2016), suggesting a reliance on context and lipreading to aid comprehension of these signs in normal conversation. Mouthing occurs when a signer produces a part or all of an English word on the mouth while signing (Boyes Braem and Sutton-Spence 2001). A result of language contact with majority spoken languages, mouthing is often used by signers to disambiguate meanings or senses of particular signs (Brown and Cormier 2017; Proctor 2016; Stamp 2016). In addition to regional variation in the lexicon, regional differences have also been found in BSL in the use of English mouthing. Proctor (2016) found evidence that signers from the South of the UK (Bristol and London) mouth more than signers from the North of the UK (Belfast and Glasgow).

Although it is clear that there is still extensive regional variation in BSL at the lexical level (Stamp 2016; Stamp et al. 2016), there is some evidence that regionally distinct varieties in BSL are now in decline. Specifically, Stamp et al. (2014, 2015) found that younger signers used fewer regionally distinct sign variants in comparison to older signers who used more regional variants, which indicates that levelling of regional variation is taking place in BSL. Region of school attendance also significantly predicted lexical choice, such that participants who had attended a local school (within their current region of residence) used more regional signs than those who had attended school outside their current region (Stamp et al. 2014). Stamp et al. speculate that levelling in BSL may be linked to the closures of centralised deaf schools and increased language contact amongst British signers.

Schools for deaf children are an important factor in regional variation for BSL. In fact, some people describe regional variation in BSL in terms of ‘school-lects’, rather than ‘dialects’ as in the past (prior to the 1970s) most deaf people attended residential schools for deaf children. Residential schools for deaf children in Britain can be traced back to the 18th century and as travel was limited at the time, it is unlikely that deaf children and adults had much contact with deaf people outside their schools/regions (Schembri et al. 2010). This allowed for regional variants in BSL to flourish, explaining the extensive lexical variation we see in BSL today (Stamp et al. 2014). Deaf school-leavers would then continue to use those regional signs in the local community and hence they are associated with the region of that school. Quinn (2010) explains this process as ‘schoolisation’.

Deaf schools have thus contributed to lexical variation in BSL but they have also been important in the transmission of BSL from generation to generation. This is in part due to the unique demographics of deaf communities. Only 5–10% of deaf children are native signers, born into deaf, signing families. The vast majority, 90–95%, are born into hearing families, most of whom do not sign (Mitchell and Karchmer 2004). Age of sign language acquisition in deaf children from hearing families varies greatly, depending on when they first encounter deaf signers (traditionally this has been at deaf schools). Language background – i.e. whether a signer comes from a deaf or hearing family, and the age at which they started acquiring BSL – has been found to be an important social factor in some aspects of regional variation. For example, Stamp et al. (2014) found that signers from deaf families were more likely to use traditional signs specific to their region compared to those from hearing families. Also Stamp (2016) found that deaf signers from deaf families recognised more regional sign variants outside their own region in comparison to those from hearing families.

In addition to lexical signs, another feature of BSL that exhibits regional variation is the use of fingerspelling. Fingerspelling consists of producing a series of manual alphabet letters (which for BSL signers, involves use of two hands), to represent English words. Previous research has found that there are regional differences in the amount of fingerspelling that signers from different regions use (Brown and Cormier 2017; Sutton-Spence et al. 1990). Sutton-Spence et al. (1990) found that signers from Scotland and Northern Ireland were more likely to use a large amount of fingerspelling when signing (over 80 fingerspelt words per 100 sentences in these regions) compared to signers from the South West of England where they fingerspelt less than 40 words per 100 sentences. In another study, older signers from Glasgow and Belfast were more likely to fingerspell each word in full (i.e. spell out each letter of the word manually) in comparison to signers’ from other regions in the UK (Birmingham, Bristol, London and Manchester) (Brown and Cormier 2017).

It is clear that there are regional differences in linguistic behaviour relating to use of lexical signs, fingerspelling, and mouthing, all of which can be influenced by certain additional social factors such as age, language background and school location. In addition, there is evidence that lexical variation in BSL came about as a result of where major deaf schools were based but more recently, due to the closures of those schools and increased contact, lexical levelling in BSL seems to be taking place. However, very little is known about how aware BSL signers are of various aspects of this variation and whether their attitudes/beliefs about regional variation aligns with what has been found relating to linguistic behaviour. The current study addresses the research question: What are BSL signers' attitudes towards regional variation? In the discussion, we also consider to what extent those beliefs align with signers' linguistic behaviour.

2 Methods

This study uses data from the BSL Corpus (<http://bslcorpusproject.org>). The BSL Corpus consists of video data from 249 signers from eight regions in the UK (Belfast, Birmingham, Bristol, Cardiff, Glasgow, London, Manchester and Newcastle), along with related metadata and annotations. Participants were filmed in pairs and asked to have a general conversation amongst themselves (they were not given any specific topics to discuss), to complete a lexical elicitation task where they were asked to give their signs for different concepts, to tell a personal story in BSL and additionally, they were interviewed about their beliefs and attitudes on BSL – for more in-depth information, see Schembri et al. (2013). The data for the current study was taken from the interview component of the BSL Corpus. In the interviews, participants were asked 13 questions about their attitudes towards sociolinguistic variation and change in BSL. Interviews were conducted by deaf community fieldworkers, local to each region, and questions were asked and answered in BSL. English versions of the questions are available at <https://bslcorpusproject.org/wp-content/uploads/BSLCPIInterviewQuestionnaire.pdf>.

There were five interview questions in relation to regional variation in BSL, which we focus on for this study: (1) Do deaf people in your area use signs that are different from the signs used in other parts of the UK? Give specific examples (e.g. colours, numbers etc.). (2) Do you have trouble understanding deaf people from other places in the UK? If so, which areas? (3) Aside from different signs, are there other differences in how people from other areas use sign language? (e.g. fingerspelling, mouthing etc.)? (4) If you moved to a different part of the UK, do you think it is important to use the signs in that area, or would you carry on using your own

signs? (5) Do you think that everyone should use the same signs across all of the UK? Why/why not?

2.1 Participants and sites

Responses to the interview questions from 121 participants from six regions were analysed in this study. Twenty participants from Belfast, Birmingham, Glasgow, London and Manchester, and 21 from Bristol, were selected ensuring there was a mixture of participants of different ages, genders and language backgrounds (i.e. family backgrounds – deaf versus hearing families). This was to ensure that there would be less bias in the data, as different social factors may influence language attitudes. There was also a mix of signers with and without teaching experience in BSL. This is an additional social factor that might influence language attitudes, given that teachers often have prescriptive attitudes towards the language they teach (see Table 1 for participant demographics).

3 Data analysis

Thematic analysis is a qualitative research methodology used to identify, organise, analyse, describe and reports themes found within a particular dataset. It is has

Table 1: Social factors of participants (*n* = 121), including age, gender, family background, BSL teaching experience and region.

	Belfast	Birmingham	Bristol	Glasgow	London	Manchester	Total
Age group							
16–40	8	9	6	8	6	7	44
41–64	9	7	11	6	10	7	50
65+	3	4	4	6	4	6	27
Gender							
Male	10	10	11	10	10	10	61
Female	10	10	10	10	10	10	60
Family background							
Deaf	7	10	13	6	10	7	53
Hearing	13	10	8	14	10	13	68
Teaching experience							
Yes	11	8	11	6	12	5	53
No	9	8	10	6	5	6	44
Unknown	0	4	0	8	3	9	24
Total participants in each region	20	20	21	20	20	20	121

been used in a wide range of fields in e.g. education and the social sciences (Blandford et al. 2016; Castleberry and Nolen 2018), and is often used in qualitative analysis of interview data. In the current study, a thematic analysis of the data was carried out following the six-phase approach outlined in Braun and Clark (2006). This involves: (1) familiarisation of the data, (2) generating some initial notes and codes for emergent themes, (3) searching for those themes, (4) collating those themes together, (5) searching and reviewing themes and then (6) reporting analysis of those themes.

Before beginning the thematic analysis, all of the responses to the five questions linked to regional variation were translated from BSL to English in ELAN (Wittenburg et al. 2006). Translations were done by registered and fully qualified BSL/English interpreters/translators and checked for accuracy by a deaf, native BSL signer (first author). Edits to the translations were made when necessary. The translation process allowed the first author to become familiar with the data and during this time notes were taken of patterns that emerged from the data (phase one). Responses from each participant for each of the five interview questions of interest were then coded in a single ELAN file (phase two). By coding, we mean that responses in relation to each question asked were identified. Responses from their conversational partner were translated and coded in a separate ELAN file, if they were included in the selection. Although each ELAN file focused on a single participant, their responses to their conversational partner were recorded and notes were made in the comments tier to ensure that each response was analysed in relation to the context of the conversation between both participants (Fig. 1).

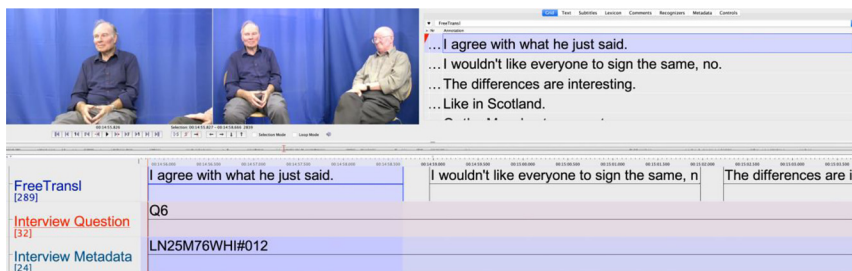


Figure 1: Example of annotations within a single ELAN file (LN25, 00:14:56²). The FreeTransl tier refers to English translations of the participants' responses, which was produced in BSL.

² Each participant in the corpus has their own code, in this case the participant's code is LN25 – i.e. participant number 25 from London. Each ELAN file represents the utterances of a single participant and the timings shown are where you would find the utterances (from the start of the video) referred to in this paper. Data are available here: <https://bslcorpusproject.org/data/>

The translations were then exported to Excel, allowing us to identify, analyze and review themes that come from the data (phases three and four). Responses in relation to each theme were examined and themes were refined where necessary (phase five), which was done in preparation for reporting those themes (phase six).

4 Results and discussion

In this section, we report and discuss attitudes of signers towards regional variation in BSL. Themes that emerged will be reported under separate sections.

Before we go on to report the different themes that came up in this study, we need to first clarify some terminology – especially ‘accent’ and ‘dialect’ – as they relate to sign languages. Signers often use a sign meaning ‘accent’ accompanied with the English mouthing, ‘accent’, see <https://bslsignbank.ucl.ac.uk/dictionary/words/accent-1.html>, to refer to lexical differences across regions. Strictly speaking, accents refer to sociophonetic variation in languages i.e. differences in the way words or signs are pronounced by people from a particular country, area or social group. As we note below in Section 4.10, it is not clear that there is sociophonetic variation of this type in sign languages amongst deaf signers. This is also the reason we avoid talking about regional variants in BSL as ‘dialects’ since a dialect typically involves systematic differences in phonology, lexicon and grammar. In sign languages like BSL, there is clear evidence of regional variation at the lexical level but less so at other levels of linguistic structure.

4.1 Awareness of extensive variation

The most obvious theme that emerged in interview responses was awareness of regional variation in BSL. Signers were aware of the extensive lexical variation in BSL and seemed to be fascinated by this, as indicated by looks of animation whilst discussing different regional variants with their conversational partner. Signers were able to give many examples as to what regional variation they were aware of. Signers were quite confident in giving examples and could specify which region they believed particular signs came from. For example, one signer from Glasgow commented on a sign meaning ‘car’ used in Newcastle (see Figure 2).

This sign is indeed produced by Newcastle signers in the BSL Corpus narrative data (e.g. NC19, 00:03:43). Another signer, from Bristol, commented on number signs used in Manchester – as demonstrated in Figure 3. The number system in Manchester is indeed traditionally two-handed, and many Manchester signers in the BSL Corpus lexical elicitation task (especially older signers) produced two-handed



Figure 2: Signer (GW17, 00:02:03) demonstrating Newcastle sign for ‘car’.

signs as their preferred signs for numbers six to ten (as documented in BSL Sign-Bank: <https://bslsignbank.ucl.ac.uk/regional/numbersigns/>). However, preferred signs for numbers 11 to 19 produced by Manchester signers (as part of the BSL Corpus lexical elicitation task) were one-handed, by signers of all ages (Stamp 2013). Stamp et al. (2015) note that lexical levelling is taking place with number signs in BSL, and the traditional two-handed number system in Manchester is now falling out of favour with one-handed variants used for numbers 11 to 19 instead. Thus in this case, the signer shown in Figure 3 is aware of the older traditional Manchester signs for numbers but perhaps not of the recent levelling (at the time of writing this form is not yet attested in the BSL Corpus, even amongst older signers in Manchester).



Figure 3: Signer (BL13, 00:02:49) demonstrating Manchester number signs (this is erroneously believed to be the traditional Manchester number 12, when it is closer to the traditional Manchester number seven or 17). This shows awareness of the numbering system but as this signer doesn’t use the system, they did not match the correct number to the sign.

Signers discussed their own regional signs for numbers and colours and how this differed to what they had seen elsewhere in the UK. Other examples that were discussed often were different signs signifying ‘people’, ‘toilet’ and the days of the week. Signers were aware that in Belfast and Glasgow, they have different signs to represent the days of the week compared to the rest of the UK. In addition, the differences between signs used by Glasgow signers who attended St. Vincent’s School for Deaf Children and those who didn’t were discussed – for example, lexical differences in number signs. As St Vincent’s School for Deaf Children was a Catholic school, many of the educators who worked there were Irish and the predominant sign language was ISL (Irish Sign Language) (Leeson et al. 2015). Although in close proximity to BSL, ISL is historically more related to French Sign Language than to BSL and its lexicon is quite different to BSL, hence the reason for the differences between Glasgow signers who attended St Vincent’s School for Deaf Children versus those who did not (Leeson et al. 2015).

These reports of extensive lexical variation are consistent with what has been reported in several studies, that the BSL lexicon does indeed vary greatly across regions (Quinn 2010; Stamp et al. 2014; Sutton-Spence and Woll 1999).

4.2 Attitudes towards extensive variation

Signers’ feelings about the extensive variation in BSL were mostly positive. Signers explicitly expressed that they were proud of their own regional sign variants, which is similar to what has been reported in studies looking into ideologies surrounding British English (Coupland and Bishop 2007). In addition, signers reported that they felt that the extensive lexical variation contributed to the richness of BSL as a language and is a part of the British deaf culture.

Signers often made positive comments like ‘I like all the variations across different areas, it is interesting³’ (BL29, 00:09:58:500). Additionally, signers mentioned that they quite enjoyed trying to guess which region signers were from upon meeting them for the first time. One signer felt that ‘when you meet someone, it is like a guessing game’, expressed with a smile that indicates this is a positive thing, (BL10, 00:09:54) and another mentioned that ‘it is interesting to recognise that someone looks like they are from Newcastle’ (BL23, 00:14:40). They felt that ‘if sign language became standardised, it would be boring’ (GW01, 00:14:55).

³ Although examples are shown as quotations, it should be noted that these are direct quotations of the English translation of the participants’ responses which were in BSL. Researchers may register (<https://bslcorpusproject.org/cava/restricted-access-data/>) to gain access to both the interview responses in BSL and the English translations.

In general, signers seemed to show pride in how BSL varied across regions with one signer explaining that ‘each region has pride in having its own’ (BM15, 00:06:41) and another saying that, ‘as for myself, I follow my signs which come from Manchester as that is where I come from with pride’ (MC28, 00:04:08:500). People seemed to enjoy discussing the differences in signs across regions, often discussing regional variation with animated looks on their faces and expressing looks of surprise/delight when they learnt of a new sign variant. For example, after learning of a new sign for ‘six’, one signer repeated this new sign and said, ‘different, ah interesting’ (BF15, 00:02:02). Many expressed the belief that ‘different signs are more interesting’ (e.g. BL02, 00:09:54) and that we should ‘keep all the varieties, they are interesting’ (BL28, 00:08:32:500). A few signers said that having their own regional signs ‘is a part of their culture’ (MC21, 00:04:50) and another believed that ‘if signs were standardised, I feel deaf culture would not be there’ (BF18, 00:08:44:500), highlighting the perceived relationship between regional variation and British deaf culture.

4.3 Mouthing

Mouthing is a part of BSL and signers in this study believed that mouthing varied quite a bit amongst signers, no matter what region they came from. This is consistent with signers’ linguistic behaviour, as Proctor (2016) found enormous variation in the amount mouthing used across individual signers from different regions. Proctor also found some regional patterns in the use of mouthing – i.e. signers from the North of the UK (in Glasgow and Belfast) mouthed less compared to signers from the South of the UK (in London and Bristol). Interviewees in the current study also noticed that mouthing generally whilst signing seemed to occur more frequently amongst signers from the South of the UK compared to those from the North of the UK. This was mostly observed by signers from Glasgow (7/17) and by signers from the South of England (i.e. Bristol and London) who were from deaf families (10/17), which indicates that signers from deaf families may have increased metalinguistic awareness in relation to BSL. Signers from deaf families may be more sensitive to various linguistic nuances such as regional differences, as they have been exposed to fluent language models from birth, and are more likely to have experienced more exposure to different varieties of BSL compared to signers from hearing families.

In addition to frequency of mouthing, signers often reported that they notice that mouth patterns are different across regions and that these differences are influenced by British English accents. Signers are aware that the English word ‘bath’ is pronounced differently in the North and South of England with

Northerners producing the word with the low front vowel [æ] and southerners producing the word with the low back vowel [ɑ], and they report that this difference is reflected in the English mouthings of signers in those regions. Other examples are the rhotic and non-rhotic versions of ‘mother’ and ‘father’; signers report that signers from Bristol tend to produce rhotic mouthings of these words (and the Bristolian English dialect is rhotic). This is consistent with studies that have shown that English accents can be identified through silent speech. For example, (Ellis et al. 2001) found that deaf people (both BSL signers and non-signers who use spoken English) were influenced by visible English accents, with deaf people from the South of England performing better on a test of speechreading because the English speakers on the test had southern English dialects. In addition, a study looking into the effects of British regional accents on silent speechreading found that hearing people are also influenced by visible regional accents, with speakers more likely to understand silent speech of speakers from their own regions (Irwin et al. 2011). These studies indicate that English accent differences are visible on the mouth.

A few signers commented that they felt ‘people who don’t move their mouth much are strong BSL users’ (BM05, 00:06:03, with a similar comment from GW20, 00:03:38). When deaf BSL signers use the term ‘strong BSL’, this usually means that a person signs BSL with minimal English influence (e.g. few English mouthings). As BSL is in close contact to English, with most deaf BSL signers being bilingual in BSL and English to some extent, most signers will incorporate linguistic features from BSL and English in their signing (see Figure 4). ‘Strong BSL’

STYLE	BSL self-conscious style	Vernacular BSL	Contact signing	Sign Supported English (SSE)	Spoken English
CHARACTERISTICS	Little or no English influence	English code-mixing, but BSL is the dominant language	Code-mixing between English and BSL with neither as dominant language	Signs are produced alongside spoken or mouthed English	Little or no BSL influence

Figure 4: A cline of language mixing varieties in the British deaf community (Schembri et al. 2013).

refers to a variety of BSL that may have some English influence but where BSL is clearly dominant over English. There were various observations about ‘strong BSL’ in the context of signers who use little mouthing, but none linked to particular regions.

4.4 Fingerspelling

Studies into fingerspelling in BSL have shown that there are regional differences in the amount of fingerspelling used across regions, with signers from Scotland and Northern Ireland fingerspelling the most (Brown and Cormier 2017; Sutton-Spence et al. 1990). In the current study, signers reported that there were regional differences in the use of fingerspelling and they felt those who lived in Scotland tended to fingerspell more than those who live in the South of England, which is consistent with these studies reporting linguistic behaviour. However, several participants felt that fingerspelling is used more in North of England as well e.g. ‘I think they fingerspell more in the North and in Scotland’ (BM22, 08:58:50), which is not consistent with findings from Brown and Cormier (2017) who found no significant differences found between frequency of fingerspelling in Manchester vs other regions. Also BSL signers in this study did not mention that Northern Ireland signers used more fingerspelling as Brown and Cormier found. In a study on ASL, some signers also commented that fingerspelling was faster and more prevalent in some areas in the USA (Baer et al. 1996); however it is unclear whether or not this correlates with linguistic behaviour.

4.5 School-lects

Some signers reported that variation in BSL was more linked to where deaf people went to school rather than where they lived. For example, some commented that ‘how you sign depends on where you went to school’ (BM10, 00:14:47) and another explained ‘as for the regions, mostly it depends on which school was attended’ (BL32, 00:04:21). They explained that regional variation is likely to have occurred as a result of deaf schools being set up in different regional areas and that there was quite a lot of lexical variation between different deaf schools, e.g. ‘different signs come from different schools’ (LN09, 00:01:50). This process has been identified as a process of ‘schoolisation’, where variation in signs seem to be mainly linked to the location of residential schools for deaf children (Quinn 2010). There is considerable evidence that variation in BSL has come about as a result of where schools were located (Deuchar 1981; Jackson 1990; Lee 2004) and this study shows

that some signers in the UK are aware of this phenomenon. The current study shows that members of the British deaf community are clearly aware of the importance of deaf schools for preserving BSL. The deaf community see current educational policies, especially the increase in the mainstream education of deaf children, as a threat to BSL generally, and particularly the regional varieties in BSL, reporting that deaf children in mainstream schools ‘would sign with speech and their own made up signs’ (MC25, 00:05:56). As Kannapell (1989) pointed out, ‘language planning means identity planning’, and the decline in regional varieties in BSL may have an impact on signers’ regional identity.

4.6 Comprehension

One of the interview questions about region was explicitly about comprehension – i.e. ‘Do you have trouble understanding deaf people from other places in the UK? If so, which areas?’ but the theme of comprehension also emerged in relation to the other region questions. In general, people often commented that they do not have great trouble understanding signers from different regions. They noted that if an issue did arise, it is easy enough to ask for clarification and usually this was to clarify a single sign that they may not have come across before. This was why signers felt BSL standardisation of regional signs is not necessary as signers from different regions can communicate without issue. In addition, signers did sometimes mention that some signers from specific regions were more difficult to follow compared to other regions, including Scotland, Northern Ireland and Wales. In particular, several signers mentioned the Scottish sign for ‘arrangement’ and how misunderstandings often came about as this sign means ‘sex’ in other parts of the UK see Figure 5.



Figure 5: Signer demonstrating Scottish sign for ‘arrangement’, which means ‘sex’ in other parts of the UK.

Stamp (2016) found that Scottish signs had the lowest recognition rates for signers from other regions in a lexical recognition task, which supports the belief that Scottish signers are hardest to follow. Two other older studies also reported that non-Scottish signers found Scottish signers were difficult to understand compared to signers from other regions (Kyle and Allsop 1982; Woll et al. 1991). Signers also mentioned that they found people from Northern Ireland hard to follow (Woll et al. 1991), which aligns with what signers in the current study reported, several decades later.

Signers expressed the belief that the use of English mouthings helped with understanding signers from different regions. Signers mentioned that they usually relied on mouthings and that they ‘would keep watching the mouth, lipreading’ (BM29, 00:01:29) when their conversational partner was signing as, ‘sometimes you need mouthings to make things clear, in context’ (BL13, 00:05:31). Signers sometimes commented that if a signer from a different region did not use any mouthing at all, they would struggle to understand that signer, e.g. ‘if there is no mouthing, I don’t understand, no’ (BL09, 00:05:05). These findings corresponds with what has been found in previous literature. In Stamp (2016) and Stamp et al. (2016), comprehension was found to be quite low when BSL signs were presented in isolation and without mouthing compared to comprehension levels during conversation. Some studies have shown that mouthing helps signers to disambiguate different signs – this is true for BSL and for some other sign languages (Hiddinga and Crasborn 2011; Stamp et al. 2015). As mentioned earlier, signers sometimes noticed that mouth patterns would be different in signers from the North and South of the UK (reflecting British English accents). Sometimes these differences in mouthing would throw signers off and cause them not to be able to understand their conversational partner e.g. ‘coke’ mouthed with [o:] or [ɔ:] in some northern varieties of English like Yorkshire vs mouthed with [əʊ] in southern varieties of English like RP. Signers explained that in these cases, they would have to use fingerspelling in order to disambiguate.

4.7 Accommodation

In the current study, regardless of their own region, signers claimed that they would adapt their signs if they moved to a different part of the UK and felt that it was important to do so in order to fit in with the local deaf community. One study found evidence of short-term accommodative behaviour in signers across four different regions; Belfast, Glasgow, Manchester and Newcastle (Stamp et al. 2016), which supports what signers say about their own linguistic behaviour. However, rates of accommodation in the Stamp et al. study were overall fairly low. It is

difficult to extrapolate this to accommodation that might happen in longer-term situations (e.g. moving to a new region). The same study found that there were some regional differences in the short-term accommodative behaviour of BSL signers, with those from Glasgow and Manchester accommodating more to a conversational partner from a different region compared to those from Belfast and Newcastle. This was not flagged up by participants in the current study.

Signers in the current study explained that the process of adapting their signs would not always be conscious and that ‘there’s no trying to fit in, without thinking, it just comes naturally’ (BF02, 00:06:00). Signers expressed that they are happy to switch between different regional varieties and often did so when they moved to a new area. Some explained that adopting new signs when they moved to a new area is important, as it allows you to fit in better with that community – one explained, ‘yeah, you’d have to because you’re moving to their area and their signing culture’ (BF13, 00:07:02). Signers felt that if they kept using their original signs and refused to adapt to the regions in which they lived, they would struggle to make new friends and to fit in the local deaf community. For example, one signer from Belfast talked of their experience of visiting a deaf club in Scotland: ‘In a deaf club in Scotland, you can’t just sign, they will not get what you’re saying, you have to change your signs to fit in’ (BF16, 00:07:15). Some signers moved away from their regions, only to return later and they were able to switch back to their former signs e.g. a signer from Manchester who noted ‘when I return to visit my homeland, I would go back to my own native signs’ (MC15, 00:08:22) and one from Glasgow who said ‘returning to my family in England, I’d change back to English signs’ (GW25, 00:08:49). There were no comments about why they would switch back to their own native signs or about any difficulty in doing so, which might suggest it felt natural – once again accommodating to those in the local community but this time with the signs they grew up with.

In some instances, although signers said they would adapt to a particular region, there were some signs that they would not adopt or some they would keep. Some signers commented that liking or disliking a particular sign influences how they would choose to sign. For example, one person from London said that they would not adopt the Manchester number signs, as they disliked them and another person who went to Doncaster College kept the Doncaster sign for ‘kitchen’ when they returned to Birmingham because they really liked that particular sign (see Figure 6 below).

Others commented that ‘a hearing person would not change their accent’ (GW02, 00:15:20) and that ‘you can’t force them all to not have an accent and all sound the same’ (BM23, 00:09:14). They noted that hearing people also find it hard to change their accents when they move somewhere else: ‘hearing people have spoken accents and when they move somewhere else, it is hard to change their



Figure 6: Signer demonstrating sign for 'kitchen'.

accent' (BM06, 00:06:31). We return to this issue of comparing lexical variation to accent, below.

4.8 Respecting regional variation

As signers were proud of their regional signs, they sometimes expressed anger or disappointment when some of their regional signs had died out or if people 'brought' signs from outside the region into their regions, thus 'contaminating' their regional sign variants. Signers, particularly those who teach BSL, felt that people should respect regional variation and stick to the signs used in that region when they come or move to the area. Several who had BSL teaching experience felt strongly that BSL teachers from outside of the region should teach students signs that originated from that particular region, commenting that 'they should show respect for teaching our signs here' (BL11, 00:09:51) and 'if they are teaching sign language here, they should change to Bristol signs' (BL11, 00:09:33).

Some felt that not everyone respected regional differences and would 'bring' their signs to that region, influencing others and thus changing the signs used in that region. One signer from Birmingham noted with indignation, 'you can't just bring Wolverhampton signs and not let go of them' (BM21, 00:10:36), meaning that people should not persist in using Wolverhampton signs if they choose to reside in Birmingham. They felt that this was the cause of regional signs dying out, in part because of people not respecting or using regional signs, which shows some awareness that lexical levelling is taking place (Stamp et al. 2014, 2015).

4.9 Status of BSL

The status of BSL as a language on par with spoken languages seemed to be a major concern for signers when discussing regional variation. Several signers felt that regional variation in BSL is equivalent to accents in English and because there is a lot of regional accents for spoken English, BSL should continue to have their own regional signs. Several signers believed that regional variation in BSL is equivalent to accents in spoken English, e.g. ‘it’s the same as hearing people, they have accents’ (BF05 (00:08:01), with similar comments from BF27 (00:07:44), GW24 (00:07:57)). Some signers expressed the belief that if English speakers have accents then BSL signers have every right to have regional variation, they felt that this made the statuses of BSL and English equal. ‘Hearing people don’t change their accents’ (LN11, 00:02:46), so why should deaf people change their signs? Some expressed that variation in BSL ‘demonstrates how rich and complex BSL is as a language’ (BL23, 00:14:21) and it is the same for English: ‘the different accents make it (English) a rich language’ (MC13, 00:08:24).

This sense of wanting to make sure BSL is of an equal status to English meant that most signers were opposed to the idea of standardising BSL in terms of regional variation – e.g. ‘well, if sign language were to be standardised, hearing people should have to speak the same’ (BM16, 00:06:21). They believed that an attempt to standardise BSL would not work, as it had been tried previously by Wolverhampton University, as part of their interpreting training programme (Eichmann 2009). Signers were concerned that ‘if BSL signs were standardised, it would become inferior’ (LN11, 00:09:13), i.e. inferior to English. Some mentioned that standardisation would only benefit hearing learners as the different regional variants make it hard for them to remember all of the signs. Indeed, previous calls for the standardisation of sign language in UK and elsewhere often stem from those outside of deaf communities such as hearing educators and learners of sign language (Adam 2015; Eichmann 2009). Most of those within the deaf community see this as a threat and are resistant to such influences (Adam 2015; Eichmann 2009; Ladd 2003).

Although most were opposed to standardising BSL, a few signers entertained the possibility of maintaining regional variation, as well as creating a standard form of BSL that could be used for the media, for education and for use with large audiences. They explained that a standard form of BSL ‘would make it clear on T.V.’ (MC10, 00:04:43), as well as for teaching deaf children and for attending conferences. They commented that it would be ‘like speaking the Queen’s English for the news, without an accent’ (BM22, 00:11:19) and this view is in line with keeping the status of BSL on par with English. Some explained that the differences

in regional signs makes it difficult for hearing learners of BSL, as they have to learn and remember the different variants. Others talked about BSL in schools explaining that, ‘English is taught in a uniform way’ and that, ‘personally they feel that to teach BSL in a school, it should also be uniform’ (BL32, 00:06:53). These kinds of comments were not limited to those who had experience teaching BSL themselves. Some ASL signers have also reported that they believed signs should be the same all across the USA, as it can be hard to follow different varieties (Baer et al. 1996).

4.10 Regional variation in BSL compared to English accents

The assumption by BSL signers that regional variation in BSL is equivalent to accents in spoken languages is an interesting one. From a linguistic perspective, ‘accent’ specifically refers to sociophonetic variation. Sign languages are different from spoken languages in this respect – i.e. accent (sociophonetic variation) is much more prevalent and salient when it comes to region than lexical variation in spoken languages. To date, there is little evidence of sociophonetic variation in sign languages, including BSL (Schembri and Cormier 2019). Although sign languages exhibit extensive lexical variation, there is so far no evidence for regional accent – i.e. sociophonetic variation – in any sign language (there might be evidence for a “hearing” or “late learner” accent in BSL and other sign languages, categorised by larger, more erratic movements, but this is related to fluency and not to region (Schembri and Cormier 2019)). This prevalence of lexical rather than sociophonetic variation is likely what enables to BSL signers to change and adapt lexical variants when needed e.g. when moving to a new area (changing one’s accent is much more difficult). But despite these differences in regional variation – many BSL signers clearly think of their use of regional signs as equivalent to accent in spoken language. We suspect that regional lexical variants in sign languages have the same language ideology as accents in spoken languages in that both are salient and they mark regional identity. It may be this ideology that leads some signers who believe that they would not accommodate to other signers in moving to a new region to compare this to accommodation of accent in spoken language.

It is also clear from our data that regional variants are viewed in an overwhelmingly positive light, as most say that they wish to keep their regional signs and often discuss different regional signs with great interest. We did not find any evidence of any particular regional variants being stigmatised, the way that some accents are in spoken languages (Honey 1989). This could be for a number of reasons. It may be due to lack of any particular standard or prestige regional variety of BSL (which is itself likely due to lack of writing system). Or it could be a

result of the methodology used (e.g. use of interview rather than experiment, the way the questions were posed, and/or whether signers would have been comfortable talking about stigmatised language on camera).

5 Conclusions

To conclude, this study into the attitudes and beliefs of signers of regional variation in BSL shows that some of those beliefs are indeed consistent with linguistic behaviour indicating that BSL signers have high levels of metalinguistic awareness of the language they use every day. This study has also brought to light some ideologies surrounding regional variation in BSL and language standardisation, with many signers exhibiting positive attitudes towards how much BSL varies across regions. This sense of pride in their own regional varieties clearly influences how signers discuss regional variation, their attitudes towards this variation and language standardisation. Enormous value is placed on regional variation in BSL, as this is deemed to contribute to the richness of BSL as a language and puts it on equal footing to the surrounding majority language, i.e. English. However, there are some attitudes and beliefs that do not align with linguistic behaviour studied so far, such as differences in accommodative behavior across regions or behaviours that have not yet been explored in much depth e.g. recognising English accents via silent mouthing, which could be a fruitful topic for future research. In addition, we do not yet know how signers' own social factors may influence these beliefs and attitudes, which could also be an area to explore in the future.

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References

- Adam, R. 2015. Standardization of sign languages. *Sign Language Studies* 15(4). 432–445.
- Baer, A. M., A. Okrent & M. Rose. 1996. Noticing variation in ASL: Metalinguistic knowledge and language attitudes across racial and regional lines. In L. Byers & M. Rose (eds.), *Communication forum*, pp. 1–33. Washington D.C.: Gallaudet University Press.
- Baker, C. 1992. *Attitudes and language*. Clevedon, UK: Multilingual Matters.
- Blandford, A., D. Furniss & S. Makri. 2016. Qualitative HCI research: Going behind the scenes. *Synthesis Lectures on Human-Centered Informatics* 9. 1–115.
- Boyes Braem, P. & R. Sutton-Spence. 2001. In P. Boyes Braem & R. Sutton-Spence (eds.), *The Hands are the head of the mouth*. Hamburg: Signum-Verlag.

- Braun, V. & V. Clark. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2). 77–101.
- Brennan, M. 1975. Can deaf children acquire language? An evaluation of linguistic principles in deaf education. *American Annals of the Deaf* 120(5). 463–479.
- Brown, M. & K. Cormier. 2017. Sociolinguistic variation in the nativisation of BSL fingerspelling. *Open Linguistics* 3(1). 115–144.
- Burns, S., P. Matthews & E. Nolan-Conroy. 2001. Language attitudes. In C. Lucas (ed.), *The Sociolinguistics of sign languages*, 181–216. Cambridge: Cambridge University Press.
- Castleberry, A. & A. Nolen. 2018. Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning* 10(6). 807–815.
- Conama, John Bosco. 2020. 35 Years and counting! An ethnographic analysis of sign language ideologies within the Irish Sign Language Recognition Campaign. In Annelies Kusters, Mara Green, Erin Moriarty & Kristin Snoddon (eds.), *Sign language ideologies in practice*. De Gruyter.
- Coupland, N. & H. Bishop. 2007. Ideologised values for British accents. *Journal of Sociolinguistics* 11(1). 74–93.
- De Meulder, M. 2015. The legal recognition of sign languages. *Sign Language Studies* 15(4). 498–506.
- De Meulder, M. 2018. “So, why do you sign?” Deaf and hearing new signers, their motivation, and revitalisation policies for sign languages. *Applied Linguistics Review* 10(4). 705–724.
- Deuchar, M. 1981. Variation in British Sign Language. In B. Woll, J. Kyle & M. Deuchar (eds.), *Perspectives on British Sign Language and deafness*, pp. 109–119. London: Croom Helm.
- Eichmann, H. 2009. Planning sign languages: Promoting hearing hegemony? Conceptualizing sign language standardization. *Current Issues in Language Planning* 10(3). 293–307.
- Ellis, Tara, Mairéad MacSweeney, Barbara Dodd & Ruth Campbell. 2001. TAS: A New Test of adult speechreading. Deaf people really can be better speechreaders. In *AVSP 2001 International Conference on Auditory-Visual Speech Processing*.
- Elton, F. 2006. Changes to regional variations in BSL. *Sign Community Magazine*, 10–11.
- Elton, F. 2010. *Changing the way we sign: An analysis of the signing style used by translators in the Queen’s Christmas Speech since the 1980s*. London: Birbeck, University of London.
- Fenn, A. 1992. *A pilot study on sign language attitudes*. Unpublished thesis.
- Giles, H. & T. Rakić. 2014. Language attitudes: Social determinants and consequences of language variation. In T. Holtgraves (ed.), *The Oxford handbook of language and social psychology*, pp. 11–26. New York: Oxford University Press.
- Hiddinga, A. & O. Crasborn. 2011. Signed languages and globalization. *Language in Society* 40(4). 483–505.
- Hill, Joseph. 2012. *Language attitudes in the American Deaf Community*, 1–208. Washington D.C.: Gallaudet University Press.
- Honey, J. 1989. *Does accent matter?* London: Faber and Faber.
- Humphries, T., P. Kushalnagar, G. Mathur, D. J. Napoli, C. Padden & C. Rathmann. 2014. Ensuring language acquisition for deaf children: What linguists can do. *Language* 90(2). 31–52.
- Irwin, Amy, Michael Pilling & Sharon M. Thomas. 2011. An analysis of British regional accent and contextual cue effects on speechreading performance. *Speech Communication* 53(6). 807–817.
- Jackson, P. 1990. *Britain’s deaf heritage*. Michigan: The Pentland Press.
- Jordan, I. K. & R. Battison. 1987. A referential communication experiment with foreign sign languages. *Sign Language Studies* 1056(1). 275–287.

- Kannapell, Barbara. 1989. An examination of deaf college students' attitudes towards ASL and English. In *The sociolinguistics of the deaf community*, 191–210. San Diego: Academic Press.
- Kaplan, R. B., R. B. Baldauf & N. Kamwangamalu. 2011. Why educational language plans sometimes fail. *Current Issues in Language Planning* 12(2). 105–124.
- Krausneker, V. 2015. Ideologies and attitudes toward sign languages: An approximation. *Sign Language Studies* 15(4). 411–431.
- Kusters, A. 2014. Language ideologies in the shared signing community of Adamorobe. *Language in Society* 43. 139–158.
- Kyle, J. & L. Allsop. 1982. *Deaf people and the community*. Bristol, UK.
- Kyle, J. & B. Woll. 1985. *Sign language: the study of deaf people and their language*. Cambridge: Cambridge University Press.
- Ladd, P. 2003. *Understanding deaf culture: In search of deafhood*, 1st edn. Clevedon, UK: Multilingual Matters.
- Ladegaard, H. J. 2000. Language attitudes and sociolinguistic behaviour: Exploring attitude-behaviour relations in language. *Journal of Sociolinguistics* 4(2). 214–233.
- Lee, R. 2004. *A beginner's introduction to deaf history*. Feltham, England: British Deaf History Society Publications.
- Leeson, L., J. I. Saeed & C. Grehan. 2015. Irish Sign Language. In J. Bakken Jepsen, G. De Clerck, S. Lutalo-Kiingi & W. B. McGregor (eds.), *Sign languages of the world: A comparative handbook*, pp. 449–473. Preston and Berlin: Ishara and Mouton de Gruyter.
- Matthews, Patrick. 1996. *The Irish deaf community*. Dublin: Institiúid Teangeolaíochta Éireann.
- McDonnell, P. 1992. *Patterns of communication among deaf pupils*. Sociological Association of Ireland, National Rehabilitation Board.
- McKee, R. 2017. Assessing the vitality of New Zealand sign language. *Sign Language Studies* 17(3). 322–362.
- Milroy, J. 2001. Language ideologies and the consequences of standardization. *Journal of Sociolinguistics* 5(4). 530–555.
- Mitchell, Ross E. & Michael A. Karchmer. 2004. Chasing the mythical ten percent: Parental hearing status of deaf and hard of hearing students in the United States. *Sign Language Studies* 4(2). 138–163.
- Mitchiner, Julie. 2014. Deaf parents of cochlear-implemented children: Beliefs on bimodal bilingualism. *Journal of Deaf Studies and Deaf Education* 20(1). 51–66.
- Proctor, H. 2016. *Sociolinguistic variation in mouthings in the BSL corpus*. London: University College London.
- Quinn, G. 2010. Schoolization: An account of the origins of regional variation in British Sign Language. *Sign Language Studies* 10(4). 476–501.
- Ruiz, R. 1984. Orientations in language planning. *NABE Journal* 8(2). 15–34.
- Schembri, A. & K. Cormier. 2019. *How British Sign Language developed its own dialect*. The Conversation. Retrieved from <https://theconversation.com/how-british-sign-language-developed-its-own-dialects-112445>.
- Schembri, A., K. Cormier, T. Johnston, D. McKee, R. McKee & B. Woll. 2010. Sociolinguistic variation in British, Australian and New Zealand Sign Languages. In D. Brentari (ed.), *Sign languages*. New York: Cambridge University Press.
- Schembri, A., J. Fenlon, R. Rentelis, S. Reynolds & K. Cormier. 2013. *Building the British Sign Language Corpus* 7. 136–154.

- Snoddon, K. 2018. Whose ASL counts? Linguistic prescriptivism and challenges in the context of parent sign language curriculum development. *International Journal of Bilingual Education and Bilingualism* 21(8). 1004–1015.
- Stamp, R. 2013. *Sociolinguistic variation, language change and contact in the British Sign Language (BSL) lexicon*. London: University College.
- Stamp, R. 2016. Do signers understand regional varieties of a sign language? A lexical recognition experiment. *Journal of Deaf Studies and Deaf Education* 21(1). 83–93.
- Stamp, R., A. Schembri, B. G. Evans & K. Cormier. 2016. Regional sign language varieties in contact: Investigating patterns of accommodation. *Journal of Deaf Studies and Deaf Education* 21(1). 70–82.
- Stamp, R., A. Schembri, J. Fenlon & R. Rentelis. 2015. Sociolinguistic variation and change in British Sign Language number signs: Evidence of leveling? *Sign Language Studies* 15(2). 151–181.
- Stamp, R., A. Schembri, J. Fenlon, R. Rentelis, B. Woll & K. Cormier. 2014. Lexical variation and change in British Sign Language. *PLoS One* 9(4). <https://doi.org/10.1371/journal.pone.0094053>.
- Stokoe, W. C. 1960. *Sign language structure: An outline of the visual communication systems of the American deaf*. Silver Spring, MD: Linstok Press.
- Supalla, Ted & Patricia Clark. 2014. *Sign language archaeology: Understanding the historical roots of American Sign Language*. Washington D.C.: Gallaudet University Press.
- Sutton-Spence, R. & B. Woll. 1999. *The linguistics of British Sign Language: An introduction*. Cambridge: Cambridge University Press.
- Sutton-Spence, R., B. Woll & L. Allsop. 1990. Variation and recent change in fingerspelling in British Sign Language. *Language Variation and Change* 2(3). 313–330.
- Ward Trotter, Julie. 1989. An examination of language attitudes of teachers of the deaf. In Ceil Lucas (ed.), *The sociolinguistics of the deaf community*, 211–228. San Diego: Academic Press.
- Wicker, A. W. 1969. Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. *Journal of Social Issues* 25(4). 41–78.
- Wittenburg, P., H. Brugman, A. Russel, A. Klassmann & H. Sloetjes. 2006. ELAN: A professional framework for multimodality research. In Proceedings of the 5th International Conference on Language Resources and Evaluation (LREC), 1556–1559.
- Woll, B., L. Allsop & R. Sutton-Spence. 1991. *Variation and recent change in British Sign Language: Final report to the ESRC*. Bristol, UK.