Pronouns, agreement and classifiers: What sign languages can tell us about linguistic diversity and linguistic universals *

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Abstract

The search for linguistic universals (and understanding universals in the face of diversity) is one of the key issues in linguistics today. Yet the vast majority of the linguistic research has focused only on spoken languages. Sign languages constitute an important test case for theories on universals and diversity, since a language “universal” only deserves this name if it holds both for signed and spoken languages, and languages in a different modality surely have much to teach us about the full range of diversity within human language. In this paper I consider three morphosyntactic phenomena found in sign languages that have traditionally been assumed to be the same as spoken languages but which, on closer inspection, reveal some fundamental differences relating to particular affordances of the visual-spatial modality. In order to understand these differences in more detail, linguists must consider the multimodal nature of human language (including gesture) rather than just the classic linguistic characteristics which are the exclusive focus of much work in mainstream approaches to the study of language.

Keywords: sign language, universal, pronoun, agreement, classifier, gesture

1 Introduction

In the early twentieth century, natural sign languages used by deaf communities were incorrectly considered by many linguists and other scholars of language either as gestural systems that did not display the defining characteristics of language, or as codified manual communication systems based on spoken language (e.g., Bloomfield, 1933). William Stokoe (1960) was the first to recognise and outline the phonological patterning of a sign language (specifically, American Sign Language or ASL). In the 1970s and 1980s, research on ASL and other sign languages began to flourish. The main goal of much of the early work on sign languages (e.g., Klima & Bellugi, 1979) was to provide much-needed evidence that sign languages were ‘real’ languages. One way to justify the linguistic study of sign languages was to propose analyses which claimed that they are also subject to the principles and constraints of Universal Grammar (UG). A number of scholars found evidence for UG constraints in ASL, such as the Wh-Island Constraint, Subjacency, and the Empty Category Principle (Padden, 1983; Lillo-Martin, 1991; Romano, 1991). Descriptive research on sign languages within non-generative frameworks has, however, always co-existed alongside work within UG approaches, with some scholars questioning the notion that signed and spoken languages are based on shared universal principles of grammatical organisation (e.g., Mandel, 1977; Deuchar, 1984). Recently, Liddell (2003) has used the frameworks of mental

* Figures 1a-c are from the BSL Corpus Project data of spontaneous conversations between deaf native and near-native signers from various locations around the UK (Schembri, Fenlon, Rentelis, & Cormier, 2014). Figure 3 is from BSL SignBank (Fenlon et al., 2014). Thanks to Perry Connolly, Sannah Gulamani and Sandra Smith for acting as models for the remaining figures. Some of this paper has been adapted from Cormier, Schembri and Woll (2010), which also includes discussion of grammaticalisation of manual and vocal gestures in signed and spoken languages. Any errors in the current paper are my own.
space theory and cognitive grammar to explore how gesture and sign language are intimately related, and to show that this sign-gesture fusion results in some typologically unique structures, such as indicating verbs.

Many sign language linguists accept that sign languages consist of both traditionally “linguistic” properties (e.g., that sign languages include symbolic, combinatorial, discrete elements and exhibit duality of patterning) together with gestural properties (e.g., gradient patterns, such as those found in gestures referring to size). However, those working within generativist/formalist frameworks have attempted to fit some of these properties into existing UG models, downplaying some of their distinctive characteristics (e.g., Sandler & Lillo-Martin, 2006). A significant degree of abstraction is required for these frameworks to handle gestural/gradient properties of sign languages, and some properties of sign languages have not been fully incorporated into such models. Researchers have focussed instead on some of the abstract syntactic properties of sign language structures (e.g., Benedicto & Brentari, 2004; Sandler & Lillo-Martin, 2006). Some of the structures which have received the most attention include pronouns, classifier constructions and agreement verbs. These are the structures I will focus on in this paper.

Before continuing to discuss these constructions, it is necessary to clarify some issues relating to terminology. Because the earliest sign language researchers were aiming to justify the linguistic study of sign languages, a considerable amount of terminology was borrowed from spoken languages. Some of these terms have been more widely accepted than others for sign languages (cf. Schembri, 2003). Therefore it is worth remembering that although I will use the terms ‘pronouns’, ‘agreement verbs’ and ‘classifiers’, these structures are each known by other names, and they overlap with other structures in form and function. Differences in terminology and the nature of the overlap contribute to the controversial nature of these structures.

Researchers such as Haspelmath (2007) and Evans and Levinson (2009) have previously cautioned against assuming pre-existing categories across languages, even within just spoken languages. As we will see here, this is even more important when considering language across modalities.

2 Pronouns

Pronominal systems have been identified in sign languages at least as far back as the mid-1970s (Friedman, 1975). Since then, the term ‘pronoun’ has been widely used to refer to signs in various sign languages which have the function of personal pronouns – that is, deictic/pointing signs which refer to signer, addressee, and non-addressed participants. Examples from British Sign Language (BSL) signers are shown in Figure 1a-c.
Additionally, pointing with an extended index finger as shown in Figure 1 has many functions within sign languages. These functions include use as a pronominal, adverbial (i.e., locative), and determiner. Locative pointing signs point to a location to refer to that (or some

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1 As is conventional in the sign language literature, English glosses for signs are given in small caps (e.g., MAN) and signs which require more than one English word for translation are glossed with hyphens between words (e.g., ICE-CREAM). INDEX is used for pointing, including pronominal, signs. For these and other signs that are directed towards or located at particular locations in space, a subscript is used to indicate these locations: 1 for the signer, 2 for the addressee, and letters (a, b, c, etc.) for non-addressed participants. Indicating/agreement verbs and classifier constructions are glossed with a subscript indicating that the verb moves from the body or a neutral location to a location in space (e.g., →b) or from one location in space to another (e.g., a→b). Note that the similar glossing conventions for indicating/agreement verbs and classifier constructions are not meant to imply similar linguistic analyses. There simply are no standard ways of notating these structures.
other) location; these have an adverbial function (meaning ‘here’, ‘there’, ‘in this/that location’, etc.). Determiners are linked to nouns and occur within a noun phrase; their function includes establishing a location in space for a referent which may or may not be referred to later. Demonstrative pointing signs (as subtypes of pronominal signs or determiners) point to a location to refer to an object or concept (meaning ‘this’, ‘that’, etc.). Pointing signs are often ambiguous between these various functions (Emmorey, 2002; Fenlon, Schembri, Rentelis, & Cormier, 2013; Johnston, 2013).

Most sign language researchers either assume or explicitly argue that pronominal signs are distinct from pointing gestures as used by non-signers. There is clearly one way in which this is true. Pronominal signs have the same kind of syntactic distribution as pronouns in spoken languages, but not of pointing gestures used by non-signers. Pronominal signs serve as verbal arguments (as in (1)) and they may substitute for noun phrases (thus (2a) can be used instead of (2b) or (2c)). Those working within generative models would argue that they are also subject to binding conditions. Thus, it is argued that in sign languages, as in spoken languages, a personal pronoun cannot occur within the same clause as a co-referential antecedent. A reflexive pronoun would be required instead (Padden, 1983), as in (3).²

(1)  Pronominal signs as verbal arguments
INDEXₐ NOT-LIKE INDEX₈₈
S/heₐ doesn’t like him/her₈₈.

(2)  Pronominal signs substituted for noun phrases
a.  [INDEXₐ]ₜₙₜₘ NOT-LIKE STRAWBERRY
S/heₐ doesn’t like strawberries.
b.  [INDEXₐ BOY]ₜₙₜₘ NOT-LIKE STRAWBERRY
The boy doesn’t like strawberries.
c.  [YOUNG BOY]ₜₙₜₘ NOT-LIKE STRAWBERRY
The young boy doesn’t like strawberries.

(3)  Pronominal signs and reflexives
a.  FATHER LIKE INDEXₐ
Father likes her/him/it.
*Father likes himself.
b.  FATHER LIKE SELFₐ
Father likes himself.
*Father likes her/him/it.

Although there may be cases where pointing gestures are used instead of pronouns in spoken languages, it seems that English speakers, at least, do not regularly stop an utterance, use a pointing gesture instead of using a pronoun, and then finish the utterance. Instead, pointing gestures in non-signers appear primarily to be used as co-speech gestures, i.e. simultaneously with speech (e.g., McNeill, 1992; Enfield, 2009).

Although syntactic distribution makes pronominal signs more like pronouns, there is clearly one way in which pronominal signs differ from pronouns in spoken languages and that is in the marking of participant roles. Some work on the pronominal system of ASL has assumed a three-person system (Friedman, 1975; Padden, 1983; Berenz, 2002; Alibasic

² As noted by Levinson (1987, 1991), whether these patterns result from UG principles or reflect more general pragmatic constraints is not clear.
similar to that found in many spoken languages, on the assumption that there is a grammatical difference between the direction of pointing and/or the alignment/misalignment of pointing with eyegaze as shown in Figures 1a, 1b and 1c. This analysis has been considered problematic since there is no finite, listable set of non-first person forms or location values to which a sign might point (e.g., Meier, 1990; Rathmann & Mathur, 2002), and because similar patterns of directionality of pointing with eyegaze along with the listability issue have been documented in co-speech pointing gestures (e.g., Kita, 2003a). The only potential difference between pronominal signs and pointing gestures in terms of participant role marking may be in sign languages which have lexicalised a first person plural pronominal sign that is different from what we would expect from a sign that points to location(s) associated with its referent(s), such as ASL in Figure 2 (BSL also has a similar lexicalised first person plural pronominal sign, slightly different in movement and orientation).

Figure 2. ASL pronoun we

The reason why a first person plural form becomes lexicalised in some sign languages (in contrast to the singular) is likely related to the semantics of typical first person plurals (i.e., first person plus others versus multiple first persons). So this may be an issue related to number/plurality rather than participant role marking in particular. Overall, there is no convincing evidence for grammatical person marking in the singular for pronominal signs in any sign language described to date. Instead, in the singular, pronominal signs appear to index participant roles in ways very much like pointing gestures used by non-signers. This is reflected in analyses by Liddell (2000a, 2000b, 2003) and McBurney (2002) who have argued that pronouns are composed of discrete morphemic elements (e.g., handshape) which combine with gestural elements (e.g., location/direction).

Other properties such as referentiality, number/plural marking, and grammaticalisation patterns are either shared across pronominal signs, spoken language pronouns and pointing gestures (in the case of referentiality) or further evidence is needed to determine whether and to what extent pronominal signs are more like pronouns or more like pointing gestures used by non-signers (in the case of number/plural marking and grammaticalisation). Overall, it appears that pronominal signs in sign languages cannot be characterised exclusively either as personal pronouns, or as pointing gestures, but instead have characteristics of both. For more detailed discussion of these issues, see Cormier (2012) and Cormier, Schembri and Woll (2013).

3 Agreement

In addition to pronominal signs which have a pointing function, sign languages also have a class of verbs which have similar functions. These are referred to as ‘indicating verbs’ (Liddell, 2000b) but are more widely known as ‘agreement verbs’ (or ‘agreeing verbs’) in the
sign language linguistics literature (e.g., see Mathur & Rathmann (2010) for an overview). An example of an indicating verb in BSL is the sign glossed as PAY. In its citation form, this sign is produced with a movement away from the signer (see Figure 3). The movement and orientation of the dominant hand may be modified so that its movement is directed at physically present referents in the space around the signer’s body, or towards locations associated with absent referents. Thus, the dominant hand in the sign PAY can be moved from a location in front of the signer towards the location of the addressee to mean ‘I pay you.’ To represent ‘you pay me’, the orientation of the dominant hand and direction of its movement is reversed, moving from the location of the addressee towards the signer’s body.

Figure 3. BSL indicating verb PAY

Padden (1983) first analysed this subset of verb signs as marking person agreement in American Sign Language (ASL), building on earlier work by Friedman (1975), Kegl (1977, cited in Wilbur (1987)), Fischer and Gough (1978) and Meier (1982). In many descriptions of indicating verbs, it is the modification of the initial and/or final location and/or orientation of the hand(s) that has been analysed as a morpheme marking person agreement (e.g., Padden, 1983; Rathmann & Mathur, 2002). The location and/or orientation modifications of the citation form’s formational structure have been widely considered to be analogous to the various suffixes that mark person and number agreement in spoken languages such as Spanish (e.g., yo habl-o ‘I speak’ versus ella habl-a ‘she speaks’). When referents are present, these verbs point to the locations of these referents. When referents are not present (e.g., with non-addressed participants), Padden (1983) suggested that the particular form is dependent on a number of conditions, including that the third person argument is assigned to a location in the space around the signer’s body. For example, in the BSL clause in (4), the subject argument WOMAN is followed by a pointing sign that is directed towards a particular locus, and WOMAN is thus associated with this location in space. The ‘agreement’ is then marked in the verb sign SEND, with its initial location associated with the subject locus, creating a clause meaning ‘the women sends flowers to someone’. All subsequent reference to the subject argument should use the same locus. In this analysis, directing an indicating verb from the initial location assigned to the subject noun phrase to some other location (not here assigned to a particular object argument) is analogous to adding a person agreement affix.

(4)  WOMAN INDEX_{a} SEND_{a→b} FLOWER
The woman sends the flowers to someone.
Liddell (2000b, 2003) has argued, however, that the directionality of indicating verbs is often controlled by the real or imagined location of the referent, not by any feature that might be construed as a formal or semantic property of a controller noun phrase, which is what grammatical agreement entails (Corbett, 2006). Consider the BSL clause in (5). As is also true of ASL (Liddell, 2000b), if this were produced in the presence of the referent of the object argument in question (i.e., if the actual mother being referred to was standing near the signer and the addressee), then the sign \( \text{ASK} \rightarrow a \) would begin its movement at the chin and move towards the location of the mother standing nearby. We can see that, in this instance, the location of the referent of the object noun phrase \( \text{MOTHER} \) is not a formal nor a semantic property associated with the noun phrase itself. It is a transient property of the referent (because the mother can move to another location), not of the noun phrase in clause (5). It is not the case that spatial modifications of the indicating verb ‘agrees’ with any of the linguistic properties of the relevant noun phrase, and it certainly cannot be said that it ‘agrees’ with the location of the actual referent herself, as the location of the mother in the real world does not form part of the grammar of BSL.

(5) \[ \text{INDEX}_1 \ \text{ASK} \rightarrow a \ \text{MOTHER} \]

I asked mother (something).

Unlike the example in (4) above, in many instances there is no relationship between the locus towards which an indicating verb is directed and any properties of the associated noun phrase. In the clause in (5), the specific lexical variant of the sign \( \text{MOTHER} \) is produced on the ipsilateral side of the forehead. The sign \( \text{ASK} \rightarrow a \), however, may be directed to any location away from the signer, and not at the location of the sign \( \text{MOTHER} \) at all. Furthermore, if the signer is representing a child asking his or her own mother, then the height of the child’s mother in relation to the child may be represented by directing the sign \( \text{ASK} \rightarrow a \) away and up from the signer’s body, as in Figure 3. Thus, the locus towards which the verb \( \text{ASK} \rightarrow a \) is directed here does not reflect any formal property of the associated noun phrase at all (i.e., it is not directed to the ipsilateral forehead location of the sign \( \text{MOTHER} \)), nor any semantic properties, given that the height of the individual concerned is not part of the semantics of the sign \( \text{MOTHER} \) (cf. Liddell, 2000b).

![Figure 4. BSL ASK→a](image)

Other arguments for an agreement analysis centre on the conventionality of directionality of pointing behaviours in these verbs. Aronoff, Meir and Sandler (2000) and Meier (2002) suggest that if the directionality of indicating verbs was gestural (as suggested by Liddell, 2000b), then one would expect to see considerable variation with respect to the locations towards which indicating verbs may be directed. Yet, the directionality of indicating
verbs appears to be constrained: for example, the ASL indicating verb GIVE \(a \rightarrow b\) is directed towards locations associated with the referent represented by the ‘indirect object’ and ‘subject’ noun phrases, but not to the location associated with the referent of the ‘direct object’ (Aronoff et al., 2000; Meier, 2002; Lillo-Martin & Meier, 2011).

This argument appears to assume that adult pointing gestures are themselves not conventionalised nor constrained in any way. Work on pointing gestures by Kita (2003b), Kendon (2004) and Cooperrider (2014) indicate that there are regularities in the use of pointing, and that this class of gestures interacts in patterned ways with grammar, culture and conceptual structure. Cooperrider (2014), for example, found that the use of body-directed pointing gestures indicating the speaker reflects information structure in the co-occurring speech, and in some cases appears to interact with the number and case of the accompanying pronoun.

Liddell’s (2000b) alternative analysis is that indicating verbs represent a fusion of a lexical element with a pointing gesture. This does not mean that which verbs are indicating verbs should be predictable nor that they will not vary cross-linguistically. The way that the set of indicating verbs behaves in each language is conventionalised. Liddell (2003) proposed that each sign language’s set of indicating verbs and their properties are listed in the mental lexicon, and thus they may vary from one sign language to the next. This evidence, along with evidence from acquisition, psycholinguistic studies, neurolinguistic studies, work on emerging sign languages and grammaticalisation and sociolinguistic variation and change, all point toward an analysis which is very different from the canonical notion of grammatical agreement proposed by Corbett (2006). Instead, Liddell (2000b) argues, this aspect of sign language grammar represents a typologically unique fusion of lexical items and pointing gestures that is used for reference tracking. For more detail discussion of these arguments, see Schembri and Cormier (under review).

4 Classifiers

The term “classifier” is another which has been borrowed from spoken languages to apply to a particular phenomenon in sign languages. Specifically, the term “classifier” has been used to refer to the handshape element in verbs of motion, location and handling since the 1970s (e.g., Frishberg, 1975; Supalla, 1978). These handshapes represent categories of entities which have some shared characteristics (e.g., two-legged entity, vehicle, or upright being such as STICK-SHAPED-ENTITY-MOVE in Figure 5), or they represent handling or manipulation of an object, or the handled object itself, such as HANDLE-FLAT-OBJECT in Figure 6. These handshapes are moved or located within the signing space gradiently to represent movement and location of the referents (Liddell, 2003).

![Figure 5. Entity classifier construction in BSL](image-url)"
Researchers such as Supalla (1978) originally suggested that sign language classifier handshapes resembled classifier morphemes occurring in Athabaskan languages such as Navajo (Allan, 1977). More recently it has been shown this comparison is not appropriate, primarily because of prior misinterpretation of the Navajo data presented by Allan (Grinevald, 2000; Aikhenvald, 2003).

Schembri (2003) outlines defining criteria of spoken language classifiers, based on Grinevald’s (2000) typology, which distinguishes classifier systems from other types of classificatory systems. Specifically, Grinevald claims that classifiers are overt morphemes which constitute a morphosyntactic subsystem, are semantically motivated, do not classify all nouns in the language, and are subject to pragmatic and discourse conditions. Schembri (2003) notes that sign language classifier handshapes are problematic for nearly all of these criteria. Other researchers have observed this as well, which has led to a wide range of terminology other than “classifier” to refer to these morphemes, including ‘polymorphemic signs’, ‘polycomponential signs’, ‘depicting signs’, ‘depicting verbs’, ‘depicting constructions’ and a range of others. Schembri (2003) concludes that classifier handshapes in sign language verbs of location and motion, but not in handling verbs, do share some characteristics with verbal classifiers in spoken languages, a view also shared by others (Zwitserlood, 2003; Sandler & Lillo-Martin, 2006). Additionally, these handshapes appear to be incorporated into typologically unique constructions that involve fusions of categorical and gradient properties (Liddell, 2003) and share some features with gesture (Schembri, Jones, & Burnham, 2005; Marshall & Morgan, 2014). For more discussion of these features, see Schembri (2003) and Cormier, Quinto-Pozos, Sevcikova and Schembri (2012).

5 Gesture and Language

There are many characteristics of sign languages which have strong gestural components (Liddell, 2003), including but not limited to pronominal signs, agreement verbs, and classifier constructions. The importance of gestural elements in language is, however, not unique to signed languages. As well as the examples mentioned above there is a very close relationship between spoken language and gestures of the hands and other visible articulators (Kendon, 2004; Enfield, 2009). The form and function of co-speech gestures differ cross-linguistically (Kita & Ozyurek, 2003), and research indicates that speech and gesture develop together in
children (Stefanini, Bello, Caselli, Iverson, & Volterra, 2009), as well as in adults learning second languages (Brown & Gullberg, 2008). This evidence argues strongly for a united view of language and gesture as part of the same cognitive system (McNeill, 1985). When language is considered from this multimodal perspective, then what appear at first to be stark differences across signed and spoken languages then start to look much more similar (Kendon, 2008).

6 Conclusion

Here I have raised issues about the use of the terms ‘pronoun’, ‘agreement’ and ‘classifier’ in the sign linguistics literature, not to proscribe the usage of these terms, but to echo Haspelmath’s (2007) and Evans and Levinson’s (2009) concerns about the use of terminology for comparable constructions across languages, and particularly across modalities. Where there is initially sufficient evidence to support the borrowing of terminology from spoken languages in sign language description, this approach can be useful, at least until more detailed analyses become available that argue against such accounts. My main point here is to urge linguists to be careful in applying terminology from one language/family/modality to another, and to consider the appropriateness and usefulness of doing so.

Additionally, in order to properly evaluate linguistic diversity and possible language universals, it is crucial to take a broad view of language as a multimodal system. Gesture plays an important role in both spoken and signed languages—if linguists are to take the role of sign languages in an understanding of the human language capacity more seriously, then this cross-modal comparison requires a more thorough description of the composite, audiovisual nature of utterances in signed language communication.

References


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